UNITED STATES
FEDERAL COMMUNICATIONS COMMISSION

In the Matter of:)
)
PUBLIC SAFETY NATIONAL)
COORDINATION COMMITTEE)

Pages: 1 through 129

Place: Washington, D.C.

Date: June 18, 1999

HERITAGE REPORTING CORPORATION

Official Reporters
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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

PUBLIC SAFETY NATIONAL)
COORDINATION COMMITTEE)
)

Committee Hearing Room
U.S. Federal Communications
Commission
445 12th Street, S.W.
Washington, D.C.

Friday,
June 18, 1999

The parties met, pursuant to notice, at 10:00 a.m.

APPEARANCES:

KATHY WALLMAN, Chair, NCC

HAROLD FURCHTGOTT-ROTH, Commissioner

GLEN NASH, Telecommunications Division
State of California
Department of General Services

JOHN POWELL, Sergeant
University of California

RICHARD DE MELLO, Telecommunications Administrator
Michigan Department of Natural Resources

SCOTT HARRIS, Moderator, Audience Participation

BRUCE FRANCA, Deputy Chief
Office of Engineering Technology, FCC

STEVEN PROCTOR, Public Safety Wireless Network
The Utah Communications Agency Network

APPEARANCES (CONT.):

JANE SCHWEIKER, Director of Public Policy and Government Relations
American National Standards Institute

Hearing Began: 10:00 a.m. Hearing Ended: 2:50 p.m.
Recess Began: 12:55 p.m. Recess Ended: 2:05 p.m.

P R O C E E D I N G S

MS. WALLMAN: Could you please take your seats for an on-time departure? Good morning and welcome to the second meeting of the NCC. I'd like to ask just initially if there is anyone with us today who would like to have the benefit of sign language interpretation at the meeting?

Okay. Thank you for coming and we're honored to begin this morning with some remarks from the FCC Commissioner, Harold Furchtgott-Roth. Prior to being sworn in as a member of the Commission on November 3, 1997, the Commissioner was the Chief Economist for the U.S. House Committee on Commerce. Prior to that, he was a senior economist for Economist, Inc. and also served as a research analyst for the Center for Naval Analysis.

Commissioner Furchtgott-Roth was born in Knoxville, Tennessee and holds a B.S. in Economics from MIT and a Ph.D. from Stanford. I'd like to thank the Commissioner for joining us this morning and also, on a more personal note, I'd like to thank him for this thoughtfulness and support over the years. I've had the privilege of knowing the Commissioner basically since the day he was thought of as a nominee to the Commission and it's been a privilege to work with him and see him flourish here on the Commission.

Commissioner?

COMMISSIONER FURCHTGOTT-ROTH: Thank you, Kathy and I would like to welcome all of you to the FCC today. It's a great honor for us to be able to host this group and in doing so, I particularly would like to thank Kathy Wallman for her efforts in leading this group.

Public safety is a very important issue both here at the FCC and in Congress. I must say, during my years on Capitol Hill, there were few issues that I think united members of all backgrounds more than public safety did. It was something that would come up in all manners of discussions on all types of issues. What should we do about public safety? And everyone would pause when that question was asked. We all recognized this importance, but I must say, we all recognized the difficulty in some of the issues, coordination, finding enough spectrum, how to deal with different levels of Government.

And so, the good folks on Capitol Hill recognized the importance of these issues and teed them up for the FCC to deal with. In the FCC, we recognize the importance of these issues and we always pause, we always -- I think there is no division of opinion on public safety at the Commission, but we also recognize that these are very difficult issues, ones that we are not totally capable of dealing with, and so we have done with Congress did to the FCC, which is, in essence, we've passed the buck. We've

passed the buck to you all and to Kathy, and in sort of a reverse Harry Truman, I think that the buck stops here with you all, instead of going back the other way.

We very much look forward to what this group comes up with, to learning from you all. We know that the issues before you are very difficult and Kathy has done a wonderful job of, I think, trying to get all the parties together from all the different interest groups, all different sorts of public safety interest, and we very much look forward to learning from you all what can be done, what the Commission can do, and to that end, let me assure you that if there's anything that the Commission can do to facilitate your discussions to provide you with any information that the Commission has, I'm quite certain that we at the Commission stand ready to help you in any way we can.

I say all of this in full recognition of the difficulty of the task before you. No one believes that what you have to do and deal with is an easy matter, and we very much appreciate all of your efforts, the times that you've taken out of your other responsibilities to come to work on this group and to tackle some very difficult issues.

So, with that, let me again welcome you to the FCC. Please let me know if there's anything we can do to help you out with your deliberations.

(Applause.)

MS. WALLMAN: Thank you. Commission Furchtgott-Roth has been very supportive of the work of the NCC and we look forward to working with him in the future and to advancing our recommendations as expeditiously as possible. Thank you.

Before we get started with the rest of the program, I'd like to introduce to you the leadership of our subcommittees and I'd like each of the leaders to please stand for a moment and be acknowledged. It's a special additional commitment for these folks to take even more time out of their schedules to help organize the work of the subcommittees, so I want to acknowledge them.

The chair of the Interoperability Committee is Sgt. John Powell from the University of California in Berkeley, California. Sergeant? The first vice chair is Kyle Sinclair of the Treasury Department. There he is, over there. A test of my peripheral vision.

The second vice chair of the Interoperability subcommittee is Steve Soder of Arlington County, Virginia. There you are. Thank you. He's with the Emergency Communications Center in Arlington County, one of the finest counties in Virginia -- and not just because I used to live there.

The chair of the Technology Subcommittee is Glen Nash of the Telecommunications Division of the State of

California, Department of General Services. Good morning, Glen. Glen's first vice chair is Don Ashley of the FBI. And the position of second vice chair is held by Stephen Jennings, who handles telecommunications matters for Harris County, Texas.

The Implementation Subcommittee chair is Ted Dempsey of the New York City Police Department. Ted is not here, okay, and Ted's second vice chair is Richard DeMello, who is Telecommunications Administrator for the Michigan Department of Natural Resources.

You may have noticed that we skipped over first vice chair for that subcommittee. We're in the process of recruiting someone to do that. We had in mind somebody from FEMA who was unable to take the position, so we'll be filling that in shortly.

I'd like to do a brief overview of the day. You all should have received a handout on the way in today with an agenda and we are going to work through the agenda during the course of the day, and I don't want to rush things, but it may be that we can finish earlier. In that event, I propose that we turn back the remainder of the time to the subcommittees for them to use as they see fit, to try to make a little additional progress. We'll yield back the time, as they say on Capitol Hill.

You'll see that we begin this morning with the

adoption of the NCC rules of procedures. We've been circulating copies of this by various means over the past week or so, and with the document itself, in case you haven't received it by other means, was made available to you this morning.

That will be followed by reports from our three subcommittees who were hard at work all day yesterday, and then we'll have time to take some comments and questions from the audience. We'll have an open mike period so people have a chance to speak from the floor, and then we'll end the day -- we'll take a lunch break of abut an hour. That seemed to be adequate last time for people to get in and out of the fine dining establishments here at the Commission.

And then, we'll close the day with a couple of interesting presentations from colleagues at the Commission, PSWN and ANSI. The Commission presenter is going to answer some of the questions that have been recurrent themes in discussions I've had with NCC members and Steering Committee members about exactly when the transition to DTV is likely to happen, sort of a fundamental background point to all the work that we do here.

Okay, so, the first order of business, adoption of the NCC governance document. Let's turn briefly to that document. In conversations with the Steering Committee, we've worked through these rules that will govern the NCC,

its Steering Committee and its subcommittees as our work progresses. Informally, we have called this a governance document, although its full title is Public Safety National Coordination Committee Rules and Procedures.

In many respects, it's similar to the by-laws of a corporation, but with one important distinction. Corporate by-laws generally are directed to a process of decision making mostly governed by vote. The procedures we've established for the NCC, however, place emphasis on decision making by consensus. And as the document says, consensus involves a continual refinement of an issue through discussion, presentations, consideration of reports and studies, and other means until the issue is well-defined, all feasible solutions have become apparent, and the optimum recommendation is made.

Also, as we say in the governance document, the need to vote marks the failure of the consensus process, and so voting should be treated as a last resort. Therefore, we anticipate that the need to vote will seldom arise as the decision-making process goes forward. I should mention one important exception to this intention to avoid voting. There is one issue that will be referred to the NCC general membership for a vote, and that is the approval of the NCC's final report to the FCC.

The contents of the governance document, and it

has been arrived at through a consensus process in the Steering Committee itself, and given the advice and concurrence of our Steering Committee, I'm prepared to adopt these rules as the rules that will govern the way we work together. Copies of the document have been made available to you today, and the document will be up on the NCC web page in a few days.

I'd like to turn now to the reports of the subcommittee, which I think are really the core of what we will accomplish today. First, we'd like to start with the Interoperability Subcommittee report. Michael Wilhelm presided for the FCC, attended for the FCC, all of the subcommittee meetings in my absence, and he tells me that they went exceptionally well and that all three subcommittees made substantial progress in a session that lasted all day with only a short break for lunch.

Each of the subcommittee chairs has extracted the results of the subcommittee's discussions for presentation here today, and we begin with the report of the chair of the Interoperability Subcommittee, John Powell, whom I introduced earlier. Since 1972, John has been a police sergeant with the University of California. He is a statewide communications coordinator, has supervised the 911, EMS, fire, police dispatch, PCAP and communication center, and has oversight for the police portion of the

state 800 MHz trunk radio system. He's a member of NTSPC, has participated in PSWAC and is a member of the International Association of Chiefs of Police.

John, I'd appreciate it if you could give a summary of yesterday's events at the Interoperability Subcommittee meeting and the details of any conclusions that were reached.

MR. POWELL: I'd be happy to do that. Several people suggested, Michael, that we might want to go through that presentation just as an overview, that we opened with yesterday, assuming there's time, and I think there will be. That's on this diskette, if we can plug that in, we'll do that in a few minutes here.

As Kathy said, I think all of the subcommittees yesterday got a lot done, considering that it was our first meeting, especially with organizational issues, which most of us addressed. Specifically, we started out, and I think a major thing that we did to start with was to adopt the definitions from the PSWAC final report, specifically for public safety and public service, and also, all of those definitions that pertain to interoperability, to the degree that we all realize that at some point in our deliberations, it may be necessary to revisit one or more of those, but that they were an appropriate starting point.

We reviewed the various tasks that were outlined

for our subcommittee and the information we received from the Steering Committee. We broke those tasks down into five, or divided them among five working groups. By hook or crook, we selected chairmen for those five working groups and I'll briefing describe what those are.

Working Group #1 is a drafting group. Bob Schleman from the New York State Police is going to chair that group. We have a second group that is going to address operational issues, which includes five of the tasks. That will be chaired by Cal Sinclair from Treasury, who's one of the committee vice-chairs.

We have a third working group that is going to address those issues surrounding rules and policies and spectrum planning, which encompassed four of the tasks. That will be chaired by Carlton Wells from the State of Florida. Our fourth group, which is a group that will be doing information gathering and liaison with outside groups, addressing five of the tasks, will be chaired by Don Foal from the City of Mesa, Arizona. And Working Group 5, which is going to look specifically at the issue of trunking interoperability channels which we gave as one of the initial high priorities of the subcommittee, because it will feed one of the requirements for the Technology Subcommittee and one of the things they'll be looking at first. Specifically, that's Task 13 out of our report, and that

group will be chaired by Dave Buchanan from the County of San Bernadino, California.

We put some time lines in place for initial work by those working groups. Specifically, Dave Buchanan is going to try to have a report from Working Group 5 for the September meeting, and we've asked the other committees to have some preliminary information back for review by the general membership of the subcommittees in November.

Our provider of internet conference services and list serves, volunteered to set up special sessions within the list serve for each of those five working groups and just for reference, if anybody would like to write, it's very simple addresses for those. They will be "iowg1" through "iowg5" @ntok. -- whatever the last part of that is, .net. And we would appreciate all of you signing up.

We actually then circulated a roster and the members present indicated which of the working groups they would like to work on, and I think we've got a good cross-section of the country and a good cross-section of the layers involved as appropriate on each of the working groups.

We had a presentation which I actually started with, which is cued now, and that, in and of itself, spurred quite a bit of discussion. And one of the points that I wanted to mention before we get into this presentation was

the fact that we do need carefully to consider the needs of our public service organizations that work so closely with public safety, particularly in major disasters and major incidents. Our utilities, in particular, and transportation providers.

At this point, if we can go through those slides, it's kind of an overview of interoperability, including some of the work from the PSWAC report. If I can just put that up here, great.

MS. WALLMAN: Could you cue the Powerpoint presentation, please? Thank you.

MR. POWELL: I apologize to those of you who sat through this yesterday. We'll do it a lot faster than we did yesterday. First of all, we went to the interoperability definition from the PSWAC final report. An essential communications link between public service and public safety, wireless communications systems, which allows units from two or more agencies to interact with one another to exchange information according to prescribed methods, in order to achieve predictable results.

I think that's a very straightforward definition. It doesn't show the several days of deliberations and arguments I think those of us that were at the PSWAC Interoperability Subcommittee meeting that finally developed that definition. Within the overall definition of

interoperability, there are three broad subcategories. Day to day involves about probably 90 to 95 percent of the interoperability that happens in this country.

Mutual aid is the second type and task force is the third type. Day to day is characterized by adjacent or concurrent jurisdictions or automatic aid applications, typically monitoring each other's routine traffic, minimizing the need for dispatcher to dispatcher interaction, and so often, dispatcher to dispatcher miscommunication, which causes sometimes significant problems in the field, dealing with problems.

It may involve multiple radios in each vehicle, and sometimes it's not very efficient if the participants are in different vans. Mutual aid is characterized often by the activation of state level agreements or laws. Often involves many agencies with little opportunity to do preplanning, although the overall picture may be very carefully planned, for example, through the ICS system.

It often requires assignments of many responders to small groups with their own talk group or channel, requires -- typically is portable communications-based and often in rural areas, especially if we're talking about incidents like wild land fires, involves operations in areas that are out of infrastructure range.

And last, but certainly not least, are our task

forces which generally involve multiple layers of Government, require close-in communications, typically have lots of time for prior planning, use portable or covert equipment. Communications security is often essential. The nature of traffic is such that wide-area broadcast is usually undesirable, however, it may move throughout a wide area while this close-in communications is occurring, and is often implemented today because of a lack of interoperability by exchanging equipment, generally equipment being provided by, if there's a federal agency participating, by the federal partner, especially if it is of the nature that it needs to be secure or encrypted communications.

The technologies that we talked about are conventional systems, Simplex or mobile relay, analog trunked, project 25 digital and infrastructure-based technologies. Conventional, of course, is use of Simplex or repeater operations. All subscriber units being in the same RF band, and if we're using secure equipment, as I mentioned for task forces, it typically requires equipment from the same vendor.

Analog trunked, currently available only in 400 and 800 MHz bands for state and local and 400 for federal, although it was pointed out that there are some 150 MHz systems that are about to come on line that are being

installed as we speak, specifically in New Hampshire for state operation and in Wisconsin for state operation.

Proprietary systems require subscriber equipment from the same manufacturer or a licensed second-source provider and secure equipment requires equipment from the same vendor, secure communications.

In the Project 25 arena, we're talking about vendor-independent equipment, including secure models, infrastructure not being required for conventional operations, and that some advance features may be interoperable. This has kind of been the Project 25 oversight slide here with the overall goals of that activity.

Infrastructure-based interoperability typically required when you have non-compatible, generally trunk systems. When subscriber units are on different RF bands, secured communications is generally not possible, unless all participants are using equipment with the same voice coder/decoder. It usually requires one RF channel on each participating system, meaning that it is not spectrum efficient. It is not usable when out of range of infrastructure, such as in remote areas, and we noted that many mutual aid operations fall into that category.

All participating infrastructures must cover the entire service area, or some people get left out of the

conversation. But it does provide control that is often not available with other systems, especially control from the supervisory or dispatch centers. What are we looking at for the future? We're looking at rate-intensive data, something that we will need to address in this process, because for the first time within the 700 band, we have the wide-band channels available to support graphics, multi-media and video applications. We're talking about eventually the convergence of data, video and voice services, which we are seeing happening all over the commercial markets today.

Stealing this from actually a presentation that Marilyn Ward did earlier this month to a federal group in Florida, she pointed out that 75 percent of the nation's 19,000 agencies and law enforcement have fewer than 25 officers. Most do not have someone dedicated as a communications director or, often, even a communications officer. And very often, clearly more often than not, the agency leaders are not technology-proficient.

We have political relationships or the lack thereof. We have limited funding and frequency incompatibility, and we did -- I've got to look around and see, there are representatives here today -- we did thank NIJ for being there yesterday, because we're all looking to them --

MS. WALLMAN: I think Bret is here.

MR. POWELL: Yes. We're all looking at them to resolve that issue for us in the law enforcement community. We have outdated and incompatible equipment and we have, I think, until this -- starting with PSWAC, but clearly with this process, we've had a lack of long-range visionary planning. And I think now that we're looking to ten years in the future, we have the opportunity to do some of that that has never existed before.

So, how do we correct it? It involves a whole lot of us playing the game, starting with coordination through this organization. We have participation from all of the federal agencies, but especially from the ones that are involved on a regular basis, which I've listed here, CAMA, FLWG and PSWN.

We have many state agencies, I've just listed a couple of them that are key players here. We have the regional planning committees which certainly have their pulse on what is going on in the local areas, and a big part of the picture is going to be standards, both operational and technical. And I might say that we spent quite a bit of time yesterday talking about the fact that no matter how good technical standards are, in the end, it all falls down to having proper operational plans. Because, if you don't have proper, operational guidelines, you can't implement the technology. You can have it sitting on the shelf.

And a good example of that was the fire a couple of years ago in Southern California in Laguna Hills, where the Orange County Fire Department had primary responsibility. They were on scene with their beautiful new radio system. They requested mutual aid from their adjoining Los Angeles County, who arrived on the scene with their nice, new, beautiful 800 MHz radio system, and they said, we can't talk to each other, because the channels didn't say the same thing. Even though the same frequencies were programmed in the radio, they had put different legends on the channels. And when they went through all of them, they didn't say the same thing. So, the leadership said, we can't talk to each other, when, in fact, the frequencies, the proper codes, were all programmed into the radios.

That's one of the issues that clearly needs to be addressed. And we'll forego the questions, unless there's questions when I get all done here.

MS. WALLMAN: Well, thank you very much. I think this kind of presentation should be posted to the web page.

MR. POWELL: We will do that, and in fact, if there are people here today that would like to get a copy of that, we do have a few diskettes that we'll be happy to load it on. We'll be getting the formal minutes together. Bob Schleman is working on that, probably as we speak here, and I will include this with those minutes and we will be happy,

it can be posted anywhere. Marilyn and I have no pride of ownership on it and, in fact, we'd love it to be circulated.

MS. WALLMAN: Okay, we've imposed a little bit further on Tim Lonstein's good graces and good humor. He's agreed to help us beef up the site where we could quickly add things of this nature.

I should also mention that you may recall in our first meeting, I adverted to our obligation to provide to the FCC a progress report at the end of June. So, my thought is, material like this and the progress reports from the subcommittees would be the core of that report, because it does represent the core of the progress that we've been able to make.

MR. POWELL: Are you looking at just the minutes, or would you like us to put more detail in the minutes?

MS. WALLMAN: A narrative would be helpful, as well, and we would include the minutes as an appendix.

MR. POWELL: Sure, and I would, I think on behalf of all the subcommittees, like to thank Tim, because he did volunteer to provide list serve for all of the working groups, also.

MS. WALLMAN: Tim has become the communication director's communication director.

MR. POWELL: Thank you.

MS. WALLMAN: Thank you very much for all of your

work, John, and all the members of your subcommittee. I realize that in saying that, I may be thanking overlapping groups of people, because I understand that there is substantial infiltration of one subcommittee by another, and I think that's all to the good, because it will make it possible and secure that we'll have a well-integrated report at the end of all of our work.

I'd now like to recognize the chair of the Technology Committee, Glen Nash, whom I introduced earlier. Glen is no stranger to most of the people in this room, because he's been a valued colleague of many of them for many years. He has 26 years of engineering experience in the design installation and maintenance of land mobile radio systems used by California Public Safety Agencies. He has been an active participant in Spectrum-related issues for the past 12 years, including leadership roles in PSWAC, Project 25 and TIA.

Glen, the Technology Committee has one of the most complex tasks that's been entrusted to the NCC, and I'm eager to hear your report about what transpired. I see you have a disk.

MR. NASH: Yes, I can't talk without it.

(Pause.)

MR. NASH: Good morning, it's a pleasure to be here. As you'll see here, okay, coming up, okay, it's doing

things I didn't expect it to do. Okay, it's going to animate for me. Terrific.

Committee structure of the Technology Committee and I'm the chairman. Vice chairmen are Don Ashley from the FBI, Steve Jennings from Harris County, Texas, and as a result of yesterday's meeting, we have identified five working groups to split into.

The first of those groups is the Voice Standards Working Group. As Kathy indicated, there's quite a bit of interaction between the committees. You'll notice here that Bob Schleman, who was the chairman of the Writing Committee on John's -- or the Writing Working Group on John's committee, is the chairman of the Voice Standards Working Group on my committee. The assignment of that working group is to review the various technologies which might provide voice-type communications in the 700 MHz band. There were two motions presented at yesterday's meeting. The first was to recommend that the FCC identify ANSI Standard TIA 102BAAA, the common laws, the Project 25 common air interface, and the ANSI Standard TIA 102BABA VO coder standards as the common mode of operation in the 700 MHz interoperability channels.

A second motion was made to recommend the TETRA standard, which was developed in Europe. By decision of the committee, both of those motions were tabled pending Bob's

group getting together over the next couple of months and discussing the pros and cons of those options and coming back to the committee in September, at least what the report is, the advantages, disadvantages of one over the other, and we would hope to make a decision, I would hope in September, maybe in November, you know, on which way we should go with that.

There was some input on the part of some of the participants of what is the requirement, you know, for getting this done so fast. Why are we moving forward on quick action in this particular area? And in response to that, I would like to point out that we currently have a 50-plus year old legacy of what amounts to being a de facto standard known as analog FM that has grown, like I say, over the 50 years that land mobile radio has become a critical and important part of the operations of our public safety agencies.

Over that period of time, the use of radio by public safety agencies has grown and along with that growth has been the standards, what really is, as I say, a de facto standard on how those are used, that creates a baseline of performance that exists today. We can't go back to the way things were 50 years ago and grow a new standard. We have to realize where things are today and provide those same services now, as we move into the digital world.

What's driving us into the digital world is the Commission's report and order. The Commission is driving us toward narrower band widths. We're at a point now where if you talk with industry leaders, you talk with academia, the band width of our radio systems is getting narrow enough to the point that continuing to provide those services with analog FM is not going to be possible. It's not going to produce the quality of communications that we need to provide. Therefore, we need a transition to a digital technology in order to continue to provide that baseline of service that our people expect out there today.

So, as we move to these narrower technologies, we're being driven to a digital environment for our radios and within the RNO, the Commission mandated that all radios must be equipped to operate on the interoperability channels. This created a situation that the manufacturers cannot design the radios that would be sold for public safety agencies to operate in this new spectrum until there is an interoperability standard described, so that they can include that in the radios they're designing. We're really getting caught here in a dilemma.

A letter was presented yesterday at the meeting from Motorola, who, you know, came out in writing stating that they have stopped all product development on products for the 700 MHz band, pending a decision on the

interoperability standards, but I would point out that I think we could probably get the same letter from everyone of the manufacturers, because they're caught in the same thing, the requirement of the RNO.

The other thing is, Spectrum is currently available in some places, even though the TV broadcasters are not required to get off that spectrum until about 2005, 2006, there are many parts of the country where there are no TV stations currently and there are no TV stations allocated for the digital transition. Therefore, that Spectrum is available today. We are held up by the fact that equipment is not available.

One question that the committee has relative to voice standards and we would toss this question back to John's Interoperability Committee or to the Steering Committee or someplace for guidance, because in our statement of work was a requirement that we define trunking, and we're really raising the question, is trunking required on the interoperability channels? Is it desirable? If so, there are certain problems that have to be overcome.

One is, the definition of a trunking standard. There currently is not an ANSI-approved trunking standard in the digital environment. You know, so either this committee would have to go through the process of becoming ANSI certified, or we would have to push the existing efforts to

develop a standard for trunking in the digital world.

Second, we have questions as to whether or not a nationwide plan would be needed for fleet mapping, in order to define units within the trunking environment, or would a regional or subregional plan be acceptable? Having a trunking system, by its very definition, includes, you know, the definition of structure and how would that have to be put together?

Furthermore, then, there are questions of who's going to build the infrastructure, because trunking is dependent upon the basic radio system being there. It is not a unit to unit type communications system, so it puts a burden onto the Implementation Committee to figure out how are we going to build this nationwide or regionwide trunking system that people would operate within?

The second group, working group that was formed is the Non-Voice Standards Working Group. Dave Buchanan from the County of San Bernadino agreed to chair that working group and their basic task is to review the various technologies which might provide a non-voice type communication in the 700 MHz spectrum. Buy a little less pressure on this committee to come up with an answer right away, but nonetheless, it is something that we need to move forward on.

The question that came up within the discussion on

that group is, does the standard need to describe only the transport layer of the communications, or does it need to describe the application layer? That is, do we only describe the pipeline down which the data bits are going to flow, or do we have to describe, you know, as John indicated, the possible need for video multimedia high speed data. If you're going to have a common interoperability of those, you need to get down to describing, you know, what kind of video? How is it formatted? What kind of compression techniques are going to be used? Multimedia, you get into the same questions, imaging and data, you know, so just how far down into the application do you need to establish your standard that's going to be followed by everyone?

Of course, the question then immediately came up is, well, how far will the Commission actually mandate a standard as you get into the applications level of this? So, it's real questions that the Committee has there and I guess that question, we would kind of turn back to the Steering Committee for some guidance on as to how far down we need to go.

The third working group is the Receiver Standards Working Group. Don Foal from the City of Mesa agreed to chair that committee. Their responsibility is to review the requirements for receiver standards in the 700 MHz spectrum.

The Steering Committee provided some specific guidelines in the statement of work provided for us in that area, and basically, the committee will be working on those guidelines, as to the sensitivity, selectivity, dynamic range, reliability, durability type questions in receiver design.

The next working group is the Spectrum Utilization Working Group. It's being chaired by Ron Harriseth from APCO. They're to provide recommendations on the interference considerations in this new band to include channel-to-channel interference within the public safety portion of the 700 MHz spectrum, also, interference from and to existing TV stations that may be on the adjacent channels that we'll have to live with for a period of years here, and then interference from and to other services that may gain approval to use the adjacent channels from the upcoming auction that will be coming up.

So, some questions there on how to identify those interference criterion levels that will have to be considered.

The fourth working group is the Competition and Manufacturing Working Group. Steve Jennings from Harris County, who is one of my vice chairmen, has agreed to chair that. Again, the Steering Committee provided a statement of work with some detailed tasks there and those will be the

task of that working group.

The final working group, just like I think you're going to find with all of the others, is there's a Writing Working Group that's being chaired by the other vice chairman, Don Ashley, and they will be putting together the reports of the committee.

MS. WALLMAN: Thank you very much.

MR. NASH: I can also offer, I did bring the committee sign up sheet. There's still space at the bottom if anybody wants to sign up. We're always looking for volunteers.

MS. WALLMAN: I bet there are more pages on that pad, too?

MR. NASH: Yes, I can find paper.

MS. WALLMAN: Thank you very much, Glen, and to all the members of the Technology Subcommittee.

I'd now like to introduce Richard DeMello, second vice chair of the Implementation Subcommittee who did an able job yesterday, standing in on short notice for the chair, Ted Dempsey, who was detained in New York. Well, not detained like he sometimes detains other people.

(Laughter.)

MS. WALLMAN: But he couldn't make it. Dick has an impressive 35 years experience in public safety communications. He served for 20 years as

telecommunications administrator for the Michigan Department of Natural Resources, served as grant manager and engineer for two-way radio systems for the Law Enforcement Assistance Administration Agency in Michigan and for four years as an engineer for the Michigan Department of Transportation. He was a member of PSWAC and is on the governing board of the Public Safety Telecommunications Council.

Dick, the Implementation Subcommittee is charged with the responsibility of making a reality of the work of all the other subcommittees, so we're eager to hear how things went yesterday and what the plan is.

MR. DE MELLO: Thank you, I have no disk. So, you'll have to concentrate on me instead of some of the other videos and things like that. I felt the Implementation Committee, as well as the other committees, really made quite a bit of progress yesterday. It was very encouraging and hopefully, we will be able to produce what we said we will or what we want to effectively.

I'd like to start off by thanking the NCC for the guidance that they've provided not only the Implementation Committee, but the other committees, because you can really see that this is taking the PSWAC report to another level, to the level of actual spectrum utilization by agencies. And that's what we need. We need to get moving and make this spectrum available and help people utilize it.

We essentially created five working groups yesterday and I'll be informing you of those working groups and some of the discussions that took place within them. As was mentioned, Ted Dempsey wasn't able to make it, however, he was reported to be an excellent writer, therefore, he was assigned Working Group #1, to be the writer, handling three various tasks. I won't mention any names of who made that statement about him being such a good writer, here or otherwise. Anyway, that will encompass the reports that are due, and I also want to mention that reports from the other committees will be funneled through that writing group, so they can make sure, we can make sure everything is incorporated in our reports that are due to the NCC.

The second working group, we're calling the DTV Transition Working Group. Dave Hireman of Motorola, senior engineer from Motorola, is chairing that committee, and that is a very interesting committee. In fact, I spoke with him this morning. He's done some work in that area already and I'm hopeful that in September, we can have a fair amount of information gathered to be able to identify locations where we may be able to implement this new spectrum rather immediate, rather quickly, because of the lack of any interference from TV stations existing, etc.

We're going to be placing that information on the internet and sharing it with the other committee members.

The next working group is called the Policy Working Group -- Policy-Regional Planning Committee. There are a number of tasks assigned to this committee that relate to creation of a policy. Others are in relation to providing recommendations when people or regional planning committees ask for them.

We feel the real task of the committee is to develop every one of the requested items and have them available to be utilized as a standard baseline to provide guidance and information to the regional planning committees so that they'll have an idea of what maybe some of the engineering standards are, based upon the thoughts of the Implementation Committee and also other committees. In this policy arena, I noted during some of the other presentations yesterday and this morning, we're going to want to work closely with Ron Harriseth of APCO, because he's going to be looking at some interference standards. Well, we really want to plug those interference standards into the implementation policy, so that the whole system works correctly.

And Dave Harriman will be also phoning some of his information into that policy group, so that the whole system makes sense, if you will.

The next working group is Working Group #4 and that's Technology Policy, and -- oh, wait a minute. Let's

go back to Working Group 3. Frederick Griffin, who is a consultant, is going to chair that committee. I neglected to mention that, but not it's been taken care of.

Working Group 4, which is the Technology Policy, Ali Shanami is going to chair that working group and hopefully we can get to work on that and have some information put together for the September meeting, so that we can further that along for the December report.

The Working Group 5 is going to be an Intersubcommittee Coordination and also coordination with outside groups. We're going to be working with Don Foal, because Don Foal is going to be doing that for one of the other committees. Excuse me, my throat isn't working very well this morning.

I want to bring up some significant information that came out of the committee and some of it, well, most of it is based upon, I feel, the committee's desires to move this ahead effectively, to make it work, make the spectrum become available as quickly as we can.

One of the issues, this one was brought up by Norm Coultry. It's an excellent issue and hopefully, we can get some documentation ready for the September meeting to further this to the NCC, and that is to create a recommendation that there be an FCC mandate put on receivers being produced in the country to be DTV type at a certain

date. That date will be determined later.

We also talked about DTV penetration and some of those other mechanisms in regards to relocating channels to DTV so that the spectrum can be freed up more quickly than existing rules.

Also, in regards to regional planning and regional thrusts, we felt that it's imperative that we really give strong guidance, actually requirements, policy requirements for regions to meet, particularly in the engineering area. We may want to create some. I think we will be creating some in the area of a number of units per channel. Right now, it's a numerical figure. If you have 100 units in some areas, you can get one channel. If you have 70 in other units, you can get one channel. But there again, we're looking at a baseline minimum.

We are looking at plugging in some engineering analysis into that, instead of just a number of 100. Which, this will require, we feel, some action by the NCC to move this ahead to the FCC, so it can be incorporated into whatever documents it needs to be incorporated in, so that it becomes a reality, and we will have some of that language prepared for September's deliberation, and then it will be sent to the NCC in the November report.

One of the issues that's a charges review of the NTSPC plans and a discussion took place. Fred Griffin

informed us that PSWN did a study regarding that and I believe the location of that study was given to Michael Wilhelm yesterday, is that right? Did that take place or we're close to that or something? Fred?

MR. GRIFFIN: I don't have the exact reference, but I'm told it's on the web page. I don't have my notes with me, but (inaudible). For those of you that may or not have been there (inaudible).

MR. DE MELLO: Okay, very good. This is another example of making use of something that's already been created, the same as using the PSWAC study to move this ahead.

We spent a little bit of time talking about the need for a common database and, of course, the Public Safety National Telecommunications Council is eagerly working on that and is going to provide information to the NCC, not to steal of Marilyn's thunder, but it is being worked on. And hopefully, we can have some detail on that by the September meeting. Of course, the detail will be, at that point in time, will be kind of a coordinated detail, because I know Marilyn is sending some information to the NCC, so that portion may be fairly well under control at that time.

In the adoption of some signal standards and interference standards, we talked about those for awhile and talked about TSB 88 as one of the devices that would be used

to help in this arena. And I think that's my report.

MS. WALLMAN: Thank you very much, Dick. We are well ahead of schedule. That's the good news, and I hope it's a good omen for the progress of the Committee's work. That's the good news.

The bad news is that we need to do a little shuffling so that we keep things moving and Michael is out trying to move up some of the presentations to make things work smoothly. So, I propose that we take a short break at this point, let's say 10 minutes, and then we'll come back and resume the schedule.

(Whereupon, a short recess was taken.)

MS. WALLMAN: Can we resume, please? We're ahead of schedule and we can make some good progress if we stick to it, here.

Okay. Okay, the mark of the collegiality of this group, that people like to extend the breaks. Okay, I'd like to introduce now Scott Harris, who has graciously agreed to serve as moderator for our audience participation time. Scott is the Harris in Harris, Wiltsher & Grammis, one of the communications fields newer firms here in Washington. He advises U.S. and foreign companies on communications, internet, trade and other issues. He also serves as a member of the Industry Advisory Board of Virginia Tech's Center for Wireless Communications and has

served as the chairman of the FCC's advisory committee for the 1997 World Radio Conference.

From 1994 to '96, Scott served as the first chief of the International Bureau of the FCC, where he served the chairman's special achievement award in recognition of his excellent work. He graduated from Brown University and Harvard Law School. I'm also personally indebted to Scott for a call that he made to me in the fall of 1993, in which he said, would it be okay if I gave your resume to Reed Hunt? It turns out that answering simple questions correctly can make a big difference in your career, so I'm very grateful to Scott.

MR. HARRIS: Thank you, Kathleen. What she didn't add was that the reason I was asked here today is that I am truly ignorant of many of the issues that you've all been debating, and the thought was that out of such ignorance, only fairness could be born.

(Laughter.)

MR. HARRIS: So, let's see if that's right. I do have the sense it's sort of like inviting someone who's never seen a baseball game to umpire, but what the heck, let's take a shot.

MS. WALLMAN: The two qualifications for this job are you have to be objective and funny.

(Laughter.)

MR. HARRIS: Okay, I hope and I expect from what I've heard we will have many people with something to contribute, so may I ask for contributions?

Okay, done.

MS. WALLMAN: Excellent job. We can use this time also to direct questions to the subcommittee leaders, since that's the core of our progress today.

MR. HARRIS: Yes, sir.

MR. POWELL: John Powell. First of all, and I didn't bring this up intentionally during my subcommittee report, because it cut across at least one subcommittee and probably more like two or three. I sent you an e-mail earlier this week which you may or may not have seen. I believe Michael has it, of a couple of suggestions on the overall work guidelines that were given to the subcommittees about perhaps changing some of the terminology. And then, and we talked about this generally yesterday, addressing in a little bit more detail, in particular, some of the issues surrounding DTV and especially because the recon issues, now, I think it's appropriate for the NCC, to the degree that we can do that, of getting some input from the public safety community through the NCC back to the Commission.

So, I would hope that we could perhaps through the Steering Committee, add some of those. Additionally, task number eight, that was given to the Interoperability

Subcommittee, I think we would like the Steering Committee to perhaps flesh out a little bit more and give us a little bit more idea of what they're talking about. So, I'm raising it not just so that, to put the Steering Committee on alert, that we would like to have those issues addressed. I will be putting them in writing and forwarding it on to you.

MS. WALLMAN: Okay, you'll put it on the list serve?

MR. POWELL: Yes, so that it can be circulated and we can get the Steering Committee to address that.

MR. HARRIS: Thank you. Yes, sir?

MR. HOFFMEISTER: I'm Ernest Hoffmeister. I'm the Ericsson representative on the Steering Committee and I have two comments that I'd like to address to the Technology Subcommittee, Glen Nash and his team. In looking at the, and Glen, I apologize, I'm not completely familiar with your work plans and so on, but what I have is referenced.

One thing that would seem to be important to me, and I think the Steering Committee as we work to put a report together, is an assessment of the practicality of the approaches that are being considered here. For instance, the practicality, if there's two modulation approaches, Modulation Approach A and Modulation Approach B, how easy or hard is that to implement in a product and really, what that

would mean in terms of a relative cost of the product.

So, I guess what I'm asking is to consider an additional work task that would be something like technology readiness or practicality would be desirable, to have a cost model that, for the different options to be considered, whether it's modulation, trunking or whether it's receiver standards. Something that gives a gauge as to how easy or hard that is to implement. I would hate to see us end up this process with an interoperability mode that ends up costing $100,000 per radio, for example. I don't think there would be too many sold for that.

As a manufacturer, of course, we're interested in what the incremental cost might be to other base modes in the radio. That also, TAS will also probably require an estimate of the volume of radios that might be sold over the time period here and I think people in your subcommittee or others could make an estimate of that. So, I guess that's the essence of it, an assessment of some type of cost model, technology readiness.

The second comment has to do with IPR. I haven't heard anything yet about IPR issues and how those might be involved or addressed or resolved within the things that are being discussed here. I think we've known that those have been issues that have been talked about over the past. For instance, I did hear TETRA mentioned this morning in one of

the presentations. I believe there are some TETRA IPR issues for use in the United States that would need to be considered, and others, as well. So, that's the second comment. Thanks.

MR. HARRIS: Thank you. Would the chair of the Technology Committee like to respond to the first comment on cost modeling, as well as technology issues?

MR. NASH: Those certainly are issues that are, you know, go into any sort of decision-making model that we would have to follow. For that information, I certainly -- you know, the committee is going to have to turn back to the manufacturers for that input. It's not something that the users have access to the information on. We really need the guidance of the manufacturers as to how easy or hard something is to implement, what the cost is going to be. I think estimating the marketplace, that may be a whole lot more difficult for us, other than to say that it's the entire public safety community. You know, and just how many people will actually go to this new band, none of us have a good idea at the moment.

It's a very intriguing band for use, but there's also, you know, 19,000 police radio systems that are out there today that exist as legacy systems and how they would be converted. There's another tens of thousands of fire systems and ambulance systems and public work systems, you

know, so we have a tremendous embedded base of equipment and systems out there that public safety agencies need to expand upon. And one of the questions they always get into is, what is the cost of going to, you know, overbuilding a new system, going to a new radio system, as opposed to trying to expand an existing radio system? And when you come up against a hard wall of there's no way to expand it in the spectrum you have and you have to bite the bullet of changing to a new band and rebuilding your radio system, there's a tremendous cost there.

Particularly towards the interoperability, one of the questions that we do have that I think falls really more to the Implementation Committee, you know, is the question of, you know, what is the cost of building these systems and who's going to fund that? The comments were made about turning to Brenaher. That's dipping into the federal largesse and it's all tax dollars. And you know, I'm a taxpayer, too, and there's limits to how much I'm going to fund out of my pockets. So, I think it's tremendous concerns, the things that we do need to consider and certainly, we'll keep in mind.

MR. HARRIS: Thank you. Kathy, who is appropriate to respond to the question on intellectual property rights, which is always a hot issue when you're talking about technology?

MR. GERSE: I'll take a brief shot at it. I'm Bob Gerse, Wilks, Harris, Sedrich and Lane. I think one of the reasons why the Commission required that the standards be ANSI certified standards, either by recognizing an existing ANSI standard or contracting with an ANSI certified body or potentially, as originally seen, becoming, this body actually becoming an ANSI body, is that you would incorporate some of the requirements and certainly the other ANSI bodies like PIA have, where there is some guidelines for insuring that essential intellectual property rights are, in fact, available through various terms. I know there's a lot of controversy. I've been very much in the middle of a couple of those, as you may know, and it's not an easy task.

I would think that it is a task, it's an issue that's well beyond the expertise of most of the people involved here, and that would be why the reliance on other standards bodies' decisions would probably be very helpful.

MR. HARRIS: Thank you. Yes, sir?

AUDIENCE PARTICIPANT: I'd just like to go back one minute to Ernie's previous remarks about the cost factors, and I understand what you're saying, but I'm not sure that that's going to be very easy to do. You know, I've been involved in standards setting and the marketplace pricing for a long time, and generally what happens is, you

may be able to give some kind of a sense. I mean, if I went to you or Motorola or another manufacturer and asked you, what's it going to cost to build this, I'm not sure how you're going to tell me a reasonable answer.

First of all, I mean, a lot of it has to do with like Glen said, how many units are you going to build? I mean, and the point is, what's the marketplace? A good example, right now, I mean, we've been dealing with in the fingerprint business, live scan fingerprint devices. And they started out being around $70,000 apiece, and we're now down to, I mean, basically, there's been some improvements, some refinements in the product that does the same thing that the original units did. But the main thing is that the price is down around $25,000 now, only because of the fact that more people are willing to buy them.

So, it's pretty hard to know -- I mean, I don't know how we're going to quite do what you suggested, but, you know, I think there is some reasonable way to get a ballpark figure, maybe.

MR. HARRIS: Yes, sir?

MR. McDOLE: Art McDole, representing APCO, but at the moment, in responding to the Ericsson statement. I'm also co-chairman of Steering Committee, Project 25, and have been with the project since conception. I'm finally concerned about interoperability as we have been in that

project, and also in my career in public safety for the last 50 years.

Obviously, the idea of interoperability is to get as many people who are on the spectrum to be able to talk to each other, regardless of the frequencies they operated on or the techniques they used. And I think the goal in this new spectrum and interoperability, we've raised another specter, not only with the difference in frequency, but by assisting upon digital modulation -- and I'm not against that, by the way. I applaud the Commission for their decision to allow the balance of the band to be open to any type of technique that we choose, and I think that there will be different types of techniques chosen there, digital techniques, because no one tool fits every job. There are advantages to all the various types of modulation schemes.

However, when we get back to interoperability, there are two things that must be common. The modulation schemes must match and the vocoders must match, or there can be no interoperability. That's a well-known fact. And in the process, we may leave out some techniques that are in the rest of the band, it's unfortunate. But the challenge is out there to all the manufacturers to strive for a common mode. At the moment, the Project 25 appears to be the most logical choice. It is ANSI accepted. The CIA and the vocoder are ANSI certified. They're there, they're ready,

they're embedded based in many, many instruments at the time, particularly in the federal Government, and we're interested, of course, with interoperability with the federal people.

So, as they deliberate, if they keep in mind we're trying to get the most people into the interoperability band and achieve the goals, both of public safety and of course, information. Thank you.

MR. HARRIS: Thank you, sir. Do we have other comments people wish to make? Yes, sir?

MR. GALLELI: My name is Joe Galleli. I'm the president of the Galleli Group and familiar with public safety, and thought it was worth mentioning, having listened to a few comments concerning the balancing of manufacturing and manufacturing costs, the use of spectrum and appealing to the largest body of users with a common approach. One thing that is clear to me, this 24 MHz that's due to be received by the public safety community over the next one to five years, that's for implementation, the technology that's available to us now is, has differed a bit over the last ten years.

If it, the technology that was available ten years ago, and what has evolved over the last year or two, allow us to think in terms of a much broader application of utilization. I listened to interoperability discussions

yesterday that ranged from video through to voice, and I think there needs to be some consideration of the technologies that may be founded well enough to handle voice initially, and grow through the time that 24 MHz will evolve into the public safety community.

And in that process, I believe that there should be no rush to judgment to any one technology. There should be a good evaluation, knowing the life of the spectrum.

MR. HARRIS: Thank you, sir.

MR. SCHLEMAN: Robert Schleman, New York State Police.

MS. WALLMAN: Did you want to borrow this computer?

(Laughter.)

MR. SCHLEMAN: I really made a hit, didn't I?

MR. HARRIS: Someone will have to tell me about that later.

MS. WALLMAN: Well, he never stands up with a --

MR. SCHLEMAN: I can explain it to you. At the public safety symposium in Denver -- was it Denver?

MS. WALLMAN: Yes.

MR. SCHLEMAN: I've been to so many of them, I lost track, I had five questions, and she was on the panel. And because there were five questions, I took the computer up with me, because I had them all listed there.

MR. HARRIS: There is a panelist's nightmare, a guy stands up with a computer full of questions.

(Laughter.)

MR. SCHLEMAN: I understand. I've been there.

MR. HARRIS: Okay.

MR. SCHLEMAN: Ernie, I was a little chagrined when you mentioned $100,000 for incorporating a multi-mode radio for interoperability, and that is exactly the problem that we on the work group will have in evaluating the cost to manufacture, because we have no way of independently verifying the data that we received. So, this presents an interesting challenge.

And I note, of course, that your company manufactures triple-mode cellular PCS-type equipment, so I'm a little surprised. But be that as it may, the problem we have in the U.S. is that the U.S. is not a tight geographic area like Europe is. And while there are applications where we may wish to use TDMA, within our own systems, in order to communicate with other people that are not part of our system, much as we might like to have them be part of it, we need to have a common baseline of communication.

And we have two problems. One is, in the 700 MHz band, we have to have a common air interface. If we're going to do any cross-band interoperability through whatever mechanism, infrastructure of one kind of another, probably,

we would need to at least have common vocoders for digital to digital communication. If the vocoder formats were different, the description of the vocoders was different, then we would have a transcoding problem which inherently builds delays and loss of quality. And those are attributes that in public safety we choose not to have. We want to have everything be as quick as possible, and there are limitations in the digital technology with respect to how quick that can be because of processing time.

But certainly, by having to transcode, you exacerbate the problem. So, for those two reasons, it is important that we have a baseline standard for interoperability.

MR. HARRIS: Thank you. Do you wish to respond to any of that? Okay.

MR. HOFFMEISTER: I guess, Bob, I should apologize for the arbitrary use of $100,000 per radio. I picked that because it was so ridiculous that I didn't think it would cause any reaction.

MR. HARRIS: He did turn green.

MR. HOFFMEISTER: He did. You mentioned multi-mode radios. Of course, you understand that the manufacturers of multi-mode cellular phones billed on the order of millions, $24, $25 million per year, and that's not the case.

I guess what I'm just trying to get is your engineering judgement about degrees of difficulty. I'm not asking for precise cost estimates, but do you have a sense --

MR. HARRIS: I thought you were going to give him the cost estimate.

MR. HOFFMEISTER: I will volunteer to help that. I mean, that's something that I think any manufacturer does on a regular basis, you make an estimate of what time frame you're talking about. You have to understand the market size a little bit. You estimate the R&D cost to put that capability together and then that translates into a product cost or a delta product cost. And I'm just looking for relative comparisons. I didn't mean to try to make it into a really hard exercise.

MR. HARRIS: Thank you. Even without the computer, you can do more than one.

MR. SCHLEMAN: Well, it's because I didn't bring the computer that I forgot the other question I was going to ask.

(Laughter.)

MR. SCHLEMAN: On the subject of intellectual property rights, which has suddenly, in recent days or weeks, become a really interesting topic on the internet, we have had some meetings on the subject and been given a

statement as to what the IPR issues are relative to the TETRA technology in the U.S. And I have made inquiries of the European Technical Standards Institute to see if that conforms with the understanding they have with respect to what they perceive as a global technology.

The World Trade Organization has certain regulations which the U.S. has signed up for, which imply worldwide availability of IPR. And so, that question is being investigated and I was promised by the legal advisor for ANSI that I would have a reply this week, but I haven't seen it yet.

MR. HARRIS: Well, ANSI requires that all of its members provide IPRs on fair, reasonable terms to anybody.

MR. SCHLEMAN: With respect to any region of the world?

MR. HARRIS: I believe so. I mean, we've just been through that on the 3G effort at some great length and I would suggest to you there's a lot of learning that's very fresh on precisely these kinds of issues for 3G wireless services.

MR. SCHLEMAN: Well, that was my understanding, also, but I have a direct statement in front of any other people that is to the contrary.

MR. HARRIS: Very interesting. Do we have other contributions? Yes, sir? Don't give away my secrets.

MR. FOAL: I'm Don Foal. I'm with the City of Mesa, Arizona and I don't have the benefit of Art McDole's 50 years in the business. I have the benefit of 35 years and those 35 years have been spent in all facets of public safety, with metropolitan, major metropolitan areas, state, highway, state police, forestry, and bringing that background of public safety, I submit that the output of our recommendations in the end must be a balance of interests, but we are a public safety, we are focused on a public safety issue. We're not focused on a manufacturing issue.

We have the ability right now to solve the problems that we have had in the past of interoperability and the ability from federal, state and local to work with each other. In the last five years, I would say, I have had more discussions and more interaction with federal agencies than I did in the previous 30 years. That is an indication of me of what public safety is doing. It is drawing together from state, federal, local and we have -- we're standing on the threshold of what public safety is going to be for the foreseeable future, whether that is 50 years or 100 years.

And when this committee makes a camel out of a horse, we will error in some ways, but when we do error, it has got to be airing on behalf of public safety and not on behalf of manufacturing. We must take into account all of

those issues and make the best balanced proposal that we can, but keep in focus that we are dealing with public safety issues here now, and not with manufacturing issues.

MR. HARRIS: Thank you, sir.

MR. GRIFFIN: I'm Fred Griffin and chair of the subcommittee in the interoperability group on policy. I would like to poise an issue for the Steering Committee to consider. And let me give a little background before I poise the issue.

I'm not new to the standards and FCC Advisory Committee work. But very often, people get enthusiastic at the start and they put their name on the official register for a subcommittee and a working group, and then, for a variety of reasons, their chosen employment, they get bored, they do not attend the meetings. DIA/TIA, I believe, has an official policy, if you don't attend three, you get automatically cut off. That's a little severe.

But on the other hand, in other FCC things, you get somebody that hasn't attended for like eight or ten meetings and then you need their input and you have to -- it's very cumbersome to brief them or find out they're not interested. Here's the issue.

I think the Steering Committee ought to address some reasonable way of not excluding anybody, but dropping them off the official distribution of the group they've

signed up for. And I don't give you a number, but I'll tell you, three is too brief, because people are going to have business conflicts.

MR. HARRIS: Thank you. Kathy, would you like to respond?

MS. WALLMAN: The Steering Committee did discuss issues like that. Michael, can you describe where we came out and then I'll invite the Steering Committee members to talk about the considerations that we discussed, in figuring out how to give people the maximum opportunity to contribute without leaving the process open to people lapsing and trying to come in at the last minute.

MR. WILHELM: Well, as I recall, the sense of the Steering Committee was that the participants in this effort are all volunteers and that it would be unreasonable to drop them from a committee or subcommittee merely for non-attendance for a short period of time. We did consider the TIA three meeting standard and decided it was too rigid, and, in fact, decided that we would not adopt a standard for dropping people from membership in the subcommittee.

The only requirement we have that relates to attendance is for the final vote on the submission of the document, the recommendations to the FCC, and to vote on that document, you must have attended a meeting -- must have become a member of the subcommittee -- the committee, I'm

sorry -- within the past 90 days. Other than that, we felt, the Steering Committee felt that any time restriction would be too burdensome on volunteers.

MR. HARRIS: Does anyone wish to respond or make a comment on this issue? Yes, sir?

MR. NASH: Yes, I'm Glen Nash with the State of California, and also, chairman of the Technology Committee. I think, you know, with today's technology, the cost of keeping people informed who may not be able to attend the meetings on a regular basis is very negligible. We have, by the good graces of one of the Steering Committee members who's offering up list servers through use of the internet, really, you know, the cost of distributing information to people who can't make it to the meeting is essentially zero. But even if we had to make copies of materials and fax them out or mail them out, that's negligible.

I think it's important to keep people at least informed of what we're doing, give them an opportunity to submit comments, even if those comments are in writing or if they're verbal comments made on the phone, you know, into the process and transferred on to other people.

Where the question comes up, you know, on attendance and participation, gets into, you know, when we take a vote, you know, is the person who is voting knowledgeable about what they're voting about. And that's

where, you know, some of the questions have come up about regular attendance as being a condition of voting. As Kathy and Mr. Wilhelm have indicated, we would hope that we're not going to be taking serious votes on very many issues, that most of the decisions in the committees are going to be made by a consensus of what people think, feel is right, so therefore, it's essentially, you know, a unanimous decision of the committee to go a particular direction.

So, the only place, you know, where we may need some consideration of, you know, indication of regular attendance or at least being knowledgeable about the facts that you're voting on is when we come down to actually having to take a vote on a situation.

MR. HARRIS: Thank you. Other comments on this issue? Yes, sir?

MR. POWELL: John Powell, University of California and chair of the Interoperability Subcommittee. Unfortunately, I think as with PSWAC, this committee, the yeoman's portion of the work will be done by people that are sitting in this room. However, what just started with PSWAC was, as Glen just said, the ability to electronically -- rapidly and electronically -- exchange information. And some of the other options that are available, we certainly used a lot of conference phone calls for committee work.

There is now the ability to do internet

conferencing using exchanging of documents, live video, even, and some of those technologies which I'm trying to get more information on, because I would love to be able to use some of that.

The cost of travel to actually participate in a face-to-face meeting is beyond what many public agencies can support. In fact, many have restrictions on out-of-state travel and the very nature of a federal committee means you're going to have out-of-state travel in some cases. It is expensive, and for that reason, I think it would be very difficult for us to limit participation, because people just can't afford to get to meetings. We have to use other alternatives as much as we can and I think we intend to do that. Certainly, Glen and I do. And that's the way we will have to push forward with this.

I think that -- I'm hoping that we'll have more participation, because I found, certainly, that it is a lot easier to participate when you're replying to e-mails than it is to have to sit down and write something down and even go to a fax machine and fax it. I've got my fingers crossed.

MR. HARRIS: Thank you, sir. Is it on this issue?

MR. WELLS: Yes, Carlton Wells with the State of Florida. Going through the draft of the procedures for the NCC general membership and the subcommittee meetings, it

addresses voting procedures and quorums. And unless I -- well, I couldn't find it right quickly here, but I thought of it this morning, briefing through the draft, that there's only one quorum required, and that's of the final vote for the final report. Is that in these drafts, or did I dream that up this morning when I was reading it?

MR. WILHELM: You have me at a disadvantage, because I don't have the document before me.

MR. WELLS: Okay, well, while we're looking that up, I can go on and talk about the rest of it. Other than that, unless I'm incorrect, there's no quorum required at any of these meetings, if a vote is called. Now, if a vote is called, it's impressed upon us to reach consensus before any vote. I think a vote is evidence of our failure to reach consensus. That was mentioned, I believe, Kathleen, in your presentation last meeting.

MR. HARRIS: That would be by definition.

MR. WELLS: Yes, and also, when a decision is made at these meetings, if you're not present, you lose the right to argue. We make our decisions at these meetings and we go on with new items. To go back on a decision and try to change it, I think, would be retrospective to the progress that we need to make in this and the timeline that we have to meet. Thank you.

MR. HARRIS: Thank you. I don't really hear any

difference on this issue at the moment. Does anyone have a different view they'd like to express, or should we move on? Okay, are there other issues we'd like to raise? Yes, sir?

MR. RAMON: New York State Technology Enterprise Corporation. I'd just like to address Dr. Hoffmeister's good point about co-existence of different technologies in the same box, and trying to sort of get a handle on that, and I think that's a very good issue to raise.

Might I suggest that under the, say, auspices of someone like NTIA, that metrics be developed on those levels of difficulty, not necessarily cost, because that's industry to do. But metrics be developed so that those metrics could somehow be associated with a level of difficulty and those metrics be fed to the appropriate working committee in the, say, Technology or something, so that we can get a handle on just what is the level of difficulty with a 128 quam and a pi/4 quadriture shift cane, and have an idea --

MR. HARRIS: Is that a car or a phone?

(Laughter.)

MR. RAMON: And that's exactly where some of the points about whether or not we have the ability in the current committee groups to be able to understand what the impacts are on industry, and that's why I would suggest someone like NTIA to develop the metrics.

MS. WALLMAN: NTIA is one of the co-sponsoring

agencies of the NCC and they've been very forthcoming and very willing to help in various ways. I see an NTIA person in the back of the room. Would you care to make a comment about support or advice you might be able to provide the appropriate subcommittee in that regard?

AUDIENCE PARTICIPANT: I'd like to just take a moment to explain to you what we're doing here at NTIA. We provide a co-sponsorship. We'd like to help out as much as we can. Don Spates, the program manager, unfortunately isn't here right now, so we'd have to take that under advisement. But you know, we'd like to help out as much as we can, but we'll have to wait and see on that one.

MS. WALLMAN: Okay.

MR. HARRIS: Yes, sir? Kathy will call Larry Irving and urge him to help and I'm sure he'll be as helpful as possible.

MR. MC DOLE: Art McDole on another issue -- actually, an interpretation. As I read the report and order, we keep talking about the final report and the vote and so forth. It appears to me that the report and order leaves a door open for input from the Steering Committee on an ongoing basis to the Commission, is that correct?

MS. WALLMAN: We do owe them interim reports as we go along, yes.

MR. MC DOLE: And there will be no vote or

anything on those, as to that the recommendation of the Steering Committee arrives through the same consensus, I've been in it, and so forth and so on, when they deem it's right the way they can go to the Commission before the final report, with a request for changes which may be able, within the purview of the Commission, to implement before the final report is complete. Is that a fair statement?

MS. WALLMAN: Breaking it down a bit, I think that we -- my thought was that we would not need committee votes for the interim reports. In terms of things that we may suggest to the Commission along the way that would be changes in direction or refinements of the report and order, I'd have to consult a bit with the Steering Committee about what approval process they'd want to have in that regard. But I think there are some good ideas that may come out of the interim work, and we'll want to find a way to put those before the Commission.

MR. MC DOLE: Well, one thing, I'd put you on your guard, perhaps, I'm sure that later in the day, an issue that was raised yesterday and discussed was possibly putting a little more authority and teeth into the NCC and some of the things that are now either by request or permissive or something, giving them a little more authority.

Would it be appropriate on an interim basis that those things could be implemented if the request came from

the Steering Committee?

MS. WALLMAN: I think the issue that you're referring to is the "if requested" language with respect to regional planning committees?

MR. MC DOLE: Yes.

MS. WALLMAN: As an example, you know, there's a place where it looks as though the report and order impose that kind of structure on us. It may be appropriate for us to consult with FCC about changing that language or that's what they really meant, whether there are ambiguities elsewhere in the order that may mean they didn't really mean that.

But what I thought I would do, using that as an example, is consult a bit with the Steering Committee and figure out the appropriate way to explore the merits of the underlying idea. And then, depending on what kind of consensus we arrive at in that regard, taking into account the views that were expressed yesterday.

Assuming we think it's a good idea after we've vetted it, figure out how to raise it with the FCC and make sure that it's within our authority to do something about it.

MR. MC DOLE: Thank you, I didn't mean to put you on the spot with those questions, but it's really helpful to get some idea of what's going on.

MS. WALLMAN: Sure.

MR. HARRIS: Yes, sir?

MR. GERSE: This is a little bit, actually, of a follow on. Is it contemplated that there may be some issues, for example, digital standards, where there may be a decision recommendation of the NCC to the Commission that takes place prior to the grand, final report? In other words --

MS. WALLMAN: I hope so.

MR. GERSE: Okay, thank you.

MR. HARRIS: Yes, sir?

MR. BUCHANAN: Hi, Dave Buchanan. I'm with the County of San Bernadino in California, Southern California. Also, I'm representing the Southern California Chapter of APCO. They're actually paying my bill to get here, and one of the issues that we have and we'd like some help from this group is that the current allocations for the DTV channels preclude any use of the new spectrum in Southern California. And you're talking about 15 million people, citizens, that aren't going to have any benefit of this spectrum for a long time to come, 2,006 maybe, if the 85 percent penetration is reached.

I know it's a tough issue, I know it's a political issue, but --

(Laughter.)

MR. BUCHANAN: To say the least, yeah. But we would certainly request that if there are any ideas that come up that are ways to speed up the process of moving the existing analog stations that are occupying the spectrum now and the DTV allocations out of there, so that we can use it quicker, it would be very helpful.

I'll remind you that in the PSWAC process, the whole basis of the spectrum needs was based on Southern California's needs in the LA area, including LA County, the basin, Orange County and Western Riverside and San Bernadino Counties, and that, more than anything drove the amount of spectrum that was recommended out of PSWAC. Thank you.

MR. HARRIS: Thank you, sir. Other comments, questions? Still no computer, but a piece of paper.

MR. SCHLEMAN: Robert Schleman. A question on the rules with respect to revenue for subcommittees, decisional process, three, "A subcommittee member may designate an alternate to serve in his or her stead at a subcommittee meeting. Any such designation shall be in writing and submitted to the NCC chair." Inasmuch as the NCC chair normally isn't at these subcommittee meetings, would it be appropriate to submit that designation to the subcommittee chair for forwarding to you?

MS. WALLMAN: Yes, I think that's readily delegated and the concept was that it could be done in

advance, because presumably the member would know that he or she wasn't able to attend a meeting and so it could be done by e-mail in advance. But I'd be happy to share that responsibility by delegation to the subcommittee chairs.

MR. SCHLEMAN: Okay, thanks.

MR. HARRIS: Can we consider that done?

MS. WALLMAN: Yes.

MR. HARRIS: Done. Thank you for the suggestion. Other questions, comments? Yes, sir?

MR. ASHLEY: Hi, I'm Don Ashley with the FBI. I'm with the Public Safety Network Program Office and I'd like to provide a point of information for everybody. During Dick DeMello's briefing, he mentioned an 800 MHz study that had been done. It was done under the auspices of the PSWN program by Booze Allen, which is providing our contract support.

That document is available, along with a number of other documents, at our web site, which is www.pswn.gov, G-O-V. Also, I'd like to mention that on the sign in table out front, we've got several documents that we've produced, including the Wireless Communications Interoperability Guide, the Public Safety and Radio Spectrum Guide, the PSWN Program Analysis of Fire and EMS Communications Interoperability documents. They're available out there on the sign in table.

We also have flyers for the Lansing symposium, which is where NCC and the subcommittees are going to meet in September, along with or shortly after the PSWN symposium. And the flyers give hotel information for registration and they're also available on the sign in desk.

MR. HARRIS: Thank you very much. Other questions, comments? Is that gentleman walking towards the door or the microphone? I can't tell, he's behind the column. Yes, sir?

AUDIENCE PARTICIPANT: Just to follow on to Bob's statement, I noticed as the last item on the agenda, you have next meetings. And my discussion over the break with a representative from San Francisco, to the degree that we can harden those dates, especially for San Francisco and lock them in, it's going to be very important to our planning. So, I don't know if it was going to be just a discussion, but if those could be locked very quickly, it would be very beneficial for us, if we're going to be involved.

MS. WALLMAN: Let me spend just a minute on that right now. The next two meetings are scheduled for September 24 in Lansing, Michigan, to coincide with the symposium that was just mentioned, and November 19 in San Francisco. The September meeting will immediately follow the PSWN symposium that concludes in the morning of the 23rd, and that will give the subcommittees a chance to meet

in the afternoon, followed by the meeting of the full NCC on the 24th.

In San Francisco, there will be a meeting of the subcommittees on November 18, the day before the main NCC meeting. I raise those now because if anybody knows of conflicts, I hope they'll let me know right away. Unfortunately, after we discussed the date for this meeting, it turned out there were a couple of people who had conflicts that were shared by many others. So if anybody knows of a conflict now, yes?

MR. HARRIS: The comment was that we needed hotel information, for those of you that couldn't hear?

MS. WALLMAN: John?

AUDIENCE PARTICIPANT: As I did last time, looking at November 19, I believe that is the annual meeting of the Radio Club of America. I'm not sure. There may be some people here that could confirm that, but that typically brings a lot of us to New York City.

MS. WALLMAN: Oh.

AUDIENCE PARTICIPANT: It is Friday, the 19th?

MR. HARRIS: Whoops.

MS. WALLMAN: Yes, why don't we do this? Why don't we look at a calendar over lunch. We'll confirm with Jane, because we get into Thanksgiving shortly thereafter.

Yes?

AUDIENCE PARTICIPANT: I think what's referred to as a dinner meeting, you might want to consider having your meeting at the same date as New York City, 18, 19, for consideration.

MS. WALLMAN: Okay, we will take that under advisement. The thought in having it in California was we would have the good offices of Louise and Jane to arrange meeting space and so forth, and we'd also try to make ourselves a little more accessible to West Coast participants, but if everybody is going to be in New York, that's not going to work. So we'll confer over lunch and we'll try to come up with some options and try to resolve it today so people can mark their calendars.

MR. HARRIS: Okay, any final comments, questions, thoughts people would like to share? I want to thank you all very much. I've presided over a number of different proceedings at the FCC. I can't recall one with audience participation, I think, that was so thoughtful and measured, and I congratulate you all. Thank you very much.

(Applause.)

MS. WALLMAN: Thank you, Scott, thank you very much. All right, well, thank you, everyone, for that, and we're going to move now to hear from Bruce Franca, the Deputy Chief of the Office of Engineering Technology at the FCC. Bruce is going to speak with us today about the DTV

transition and channel allotment, which some of you touched upon in the open mike session.

Bruce was the chief architect of the FCC's DTV channel allotment plan, including the reallocation of channels 60 through 69. He joined the FCC in 1974 and has served in many key roles since then, including stints in the Private Radio Bureau and the Mass Media Bureau. He is a graduate of Pratt Institute in Brooklyn and has done graduate work in electrical engineering at George Washington University.

We're fortunate to have him here today, because he really is probably the most knowledgeable person at the Commission about this area of great importance to the NCC. That is, exactly when the public safety community can expect to start receiving news of some of the spectrum, as it comes back from the broadcasters.

And I understand that this was a matter of deep discussion yesterday and a matter of continuing interest to everyone here. So we're very fortunate to have Bruce here.

MR. FRANCA: Thank you, Kathy. I thought I would just give a brief by plan on what's happening in DTV and sort of what does the spectrum and geography look like for digital television that public safety is going to have to work around.

Basically, we started the DTV proceedings probably

about 1989. We finally came up with an initial set of DTV allotments. Each broadcaster is given a second channel. We tried to put as many operations as we could in channels two to 51, actually, to 59, and we slated for early recovery 60 to 69, with channels 52 to 59 to be recovered at the end of the transition.

Basically, in the 60 to 69 spectrum, channels 60 to 62 and 65 to 67 we've designated for commercial operations. We changed the allocations to include fixed and mobile, in addition to broadcasting, and basically we're scheduling auctions in that band and with the wireless folks working on the final rules on that.

The things that you're concerned about, channel 63 and 64 and 68 and 69, we've designated for public safety. We've got basically the process for assigning licenses. We've got the channel plan in place. We still have some petitions for consideration.

A lot of what you do really depends upon what happens in the DTV world and how quickly DTV kind of gets rolling and how quickly we can kind of get TV stations out of 60 to 69. We do have service rules and build out requirements for television stations, and those are shown there. Basically, the networks in the top ten markets must begin DTV service by having to begin it by May of '99. Most of that is sort of on track. There are a couple of tower

problems that are delaying a few folks. Network stations in the top 30 markets must begin service by November of this year and all commercial stations by May 1 of 2002 and all non-commercial by 2003.

How are we doing? This is an older slide. There's actually about 76 stations now on the air. We've got over 150 CPs have been granted and we've got about 100 CPs pending, still. We do expect somewhere between 800 and 1,200 new applications to be filed in November, so the broadcasters are at least rolling out this service fairly rapidly and people are actually kind of building stuff. I mean, we've gone out on RF cases and some other things. So, things are actually happening fairly rapidly.

If you look at this market, we've got five stations in Washington and, I think, three in Baltimore. We have a laboratory out in Columbia, Maryland and we've got a couple of HDTV sets we called in and anybody is invited to come out and look at some HDTV sets and programming.

What are the channels that the public safety community are going to have to worry about? Basically, it's channel 62, as an adjacent channel, and I don't know if this -- I guess you can see that okay. Those are both the DTV and NTSC stations that are, must be protected, and those are the service areas that would be required to be protected under the rules.

The protection rules that were adopted are basically the same protection rules that we've used traditionally for land mobile TV sharing, so they really are kind of worse case and, you know, engineering studies and agreements with broadcasters can sort of make these areas get a little smaller.

On channel 63, what do you have to worry about? Again, here's the circles. The smallest circles represent the adjacent channels, so that would be the area that you'd have to worry about if you were operating on channel 64. But the largest circles are the preclusionary areas for co-channel operation.

That sort of kind of tells you where you can put services and I have maps for each of these channels. But as you can see, I mean, there are a lot of opportunities to use the spectrum initially. It's not going to be completely easy. You're going to have to worry about and worry about where you put base stations, where you put mobile. So I'll just go through the rest of these channels. That's basically, 64, there's again a little heavy use on channel 64.

Sixty-five would be an adjacent channel situation, and that really shouldn't have to worry about much there. And the upper channels are fairly, more lightly used. And this is channel 67, again, only a few areas that we'll be

worried, again, it's adjacent channel situation. And here's what 68 would look like. And again, this is what 69 would look like.

So we think that there's some opportunities here to use the spectrum. Again, there is going to have to be some engineering constraints in place on the use of that spectrum, but in lots of areas, it should be available for public safety. That's basically, I guess, all I wanted to show you. I'd be happy to answer sort of any questions that people might have about, you know, the technical requirements for protection, or any questions about what's going to be happening with DTV and when things are coming on the air.

MR. SCHLEMAN: Two questions, Robert Schleman, New York State Police. First question is, could we get a copy of those visuals that you used before you leave today?

MR. FRANCA: Sure.

MR. SCHLEMAN: Thank you. Second question, I believe Philadelphia is DTV on channel 63 and the area of coverage probably -- channel 63 is a DTV? All right, and I would just guess that the population that that covers is probably in excess of 20 million people. And I would wonder if there has been any plan established, whether they are just doing that temporarily, or whether that's going to move to another assignment outside of the public safety band and

when that might be?

MR. FRANCA: Okay, most of the channel 60 to 69 operations are eventually going to be transitioned off those frequencies. I mean, of, you know, eventually there should be no television in channels 60 to 69. Actually, there should be no television from 52 to 69.

We think that since broadcasters generally don't like to be at those higher frequencies, when you have a choice, they're going to want to transition to make their service more attractive. What has to happen is that DTV has to be established so that we eventually have more viewers and I'm deriving my revenue from my DTV operations as opposed to my analog operations, and people start saying that, well, if I've got two TV stations showing the same programming and looking at the same eyeballs, I can shut one off, because it's just costing me money.

So, that's going to take a few years. I mean, the Commission has kind of established a 2006 deadline, where we think that that transition is going to occur. I think that's fairly ambitious and Congress passed a law that sort of could stretch it out a little bit. But the idea is that at the end of the day, channel 60 to 69 does not have TV in it.

MR. SCHLEMAN: And what day is that?

MR. FRANCA: Well, I think that depends on how

quickly all of you go buy your DTV sets and kind of get your neighbors to do the same.

MR. SCHLEMAN: Well, I'm just wondering if they have invested probably half a million to $1 million in a transmitter plant on a UHF transmit frequency, how long will it be before they amortize that investment to go to another one?

You know, they're built on --

MR. FRANCA: I could tell you today, if you went around -- let's assume that DTV never occurred, and you went to all the broadcasters that operated from 60 to 69 and said, well, I've got either a low UHF or a VHF channel available. You would see them change channels tomorrow. So nobody -- the propagation problems at those higher frequencies are significant. People don't want to be up there. Most of the people we gave those channels to wanted other channels and we only really used them because we ran out of channels.

People understand that and I think they understand the investment that they want to transition to other channels. So they're going in, I believe, knowing the rules here. And the investment, at least on the transmitter side, is probably relatively small considering all the other things that are involved in putting together a broadcast station.

MR. SCHLEMAN: Well, that's encouraging. From the public safety perspective, the State of New York is trying to implement a statewide trunking system and the coverage contours of the Philadelphia station as described on your chart take a considerable piece out of New York State and particularly, a considerable piece of the population base. Thank you.

MR. POWELL: John Powell. I was just going to comment, I think, that fortunately for us, where you show circles, when we look at the actual grade B contours, especially in mountainous areas, for those stations that are somewhat smaller --

MR. FRANCA: Those are worst case values.

MR. POWELL: Right. A question for you. How many of the top ten markets met the May 1 deadline, do you know that?

MR. FRANCA: You mean, the networks and the --

MR. POWELL: The networks, yes.

MR. FRANCA: Not off the top of my head, but everyone, I would say, made a good faith effort to do it. The people that didn't, actually, in fact, in some cases, what they did is, they went to another market to put in a station. So, the places that didn't make it -- New York was one that didn't. Detroit was once one with real legitimate problems, and I think that we were involved in their either

negotiating antenna facilities and they're actively doing, and really couldn't get either RF clearances or tower clearances.

So it wasn't for the lack of trying, I don't think, anywhere. And we actually had a lot more stations on the air than had to be on the air.

MR. POWELL: Also, I thought your comment about coming to your facility here to see it was interesting, because we might be hard pressed to find another DTV receiver between here and there. In the San Francisco area, I am seeing no advertising for digital TV receivers, nowhere, even though we've got, supposedly, have stations on the air. I don't know why, nor have I seen any of them in any showrooms. We see direct broadcast satellites, convertor boxes for digital cable, but it's all driving stuff back to converting it back to use with our analog sets. They're not being advertised.

MR. FRANCA: I think there are still some issues that need to be resolved and we're working on in terms of cable compatibility and some copyright issues that the Commission needs to kind of settle before, you know, you'll see that kind of widespread.

MR. HIREMAN: Yes, I'm David Hireman with Motorola. I'm going to be chair of the DTV Transition Working Group in the Implementation Subcommittee, so I guess

I need to talk to you about who I talk to at OET on some of these issues.

I've got a couple of questions. One, what was the radius of the circles you showed on those maps, I mean, for the adjacent and the co-channel?

MR. FRANCA: We used the largest power and I believe that was 130 miles, was the largest.

MR. HIREMAN: Okay. And you said that included both the analog and the digital. What was included, because I know there's things like, there's licensed stations. Then there's like applications and there's place holders in the database and there's things that they're regulations to add stations.

MR. FRANCA: We showed every analog and DTV station that was eligible under the DTV criteria.

MR. HIREMAN: Which includes frozen applications, then?

MR. FRANCA: Some applications would be shown there, but applications that did not meet the eligibility criteria -- we have lots of applications on 60 to 69 that we basically said they're too late. We will allow them to modify and come in on a different channel, if they can. Those were not shown. So there's not a lot of applications there. There might be one or two.

MR. HIREMAN: Okay, I was going to say, there's a

lot of things still in the FCC's current TV database that are shown as applications.

MR. HIREMAN: Most of those are not eligible and do not have to be protected.

MR. HIREMAN: Okay. And Canada has also allocated DTVs and I pulled down their file the other day, and it appears that they've allocated in excess of 30 channels along the border, you know, the Great Lakes area, I guess. I mean, is there something going on between the FCC and Canada, or is Canada trying to eventually move out of that band, also?

MR. FRANCA: Well, that's a couple of questions. Yes, there are some things going on with Canada. We are negotiating a new broadcast agreement to take into account our efforts to bring DTV into being and we have done something to kind of -- we both have plans now, DTV plans in place, and we think those DTV plans are pretty consistent or compatible across the border area.

Canada has not made a decision with regard to 60 to 69 or any spectrum recovery. They have a little bit different broadcast system than we do here in the United States. They have a lot of smaller stations. They have a lot more stations along the border than we have, and so that in developing their plan, they did use a lot more of 60 to 69 than we did, because they had just more stations to

accommodate.

Again, the protection areas around those stations just because they're smaller, probably would be a smaller protection area.

MR. HIREMAN: Okay. And one comment on your maps. It's nice to look at the maps one channel at a time, but if you want to look at like 63, 68, you need to look at like five or six channels, both co and adjacent, and when you overlay all those, you know, you wipe out large territories.

MR. FRANCA: Yeah, had we had more time and not the network gone down about four times, we were trying to kind of show 63, for example, and show the adjacent 62 and 60.

What happens predominantly, though the co-channel is the predominant conclusion area that you have to worry about, because the adjacents are a little smaller and they tend to be close by. But you're absolutely right, you have to take into account both adjacent and co-channel operations and the areas do get bigger.

MR. GERSE: This is Bob Gerse. I guess I've got a couple of questions, too. Isn't it the case that when you say, for example, especially in adjacency, that if there's a 62 and you want to use 63, the entire 63 may not be out of the question. It's really, it's adjacent, it's really some portion of the band edge, if you will?

MR. FRANCA: That's correct. I mean, I think, you know, again, the rules that were put in place were really based on the traditional land-mobile sharing rules that we've always had and, you know, they're probably the worst case. I mean, you can do some other things, you can engineer in things and our rules to allow for engineering studies and for other things to be done in agreements between broadcasters. And surprisingly, I think public safety has done a good job of kind of working with the broadcasters to get agreements, you know, in some major markets like LA and New York City.

MR. GERSE: Similar to, you mean, like 14 to 20?

MR. FRANCA: Right, so I think you can do a lot better than that graphs and I think broadcasters will be reasonable here.

MR. GERSE: Quick question. What's the statement of development of the converters because one of the criteria in the statute has to do with the penetration level of DTV capability, which includes both owning a DTV set, having it through cable or having a converter box. And I haven't seen much talk about the converter boxes.

MR. FRANCA: There is still, there's a lot of the issues, I think, are revolving around cable compatibility and NCTA and SEMA are working on a cable-compatible TV standard. They indicate that they've made significant

progress. Most of the issues that are still up in the air involve premium services such as HBO, and the concern is about copyright.

I think the broadcast side of things are pretty well nailed down. The open cable effort by NCTA sort of takes, is the other side of the cable-compatible set-top box with DTV and those standards are pretty much done. So I think a lot of progress has been done in the last couple of months to kind of resolve the technical issues. There are still some copyright issues that are out there.

MR. GERSE: One final comment, I guess, is, is that indicant to all those full service stations there are, of course, quite a few low power stations and translators out there and I certainly read the rules as saying that they're secondary, you know, and they can continue to operate, but at such time as a public safety entity, even before the DTV transition is ready to go, they're secondary.

What I don't know is how that process is going to really work out in the real world.

MR. FRANCA: No, but you're absolutely right. I mean, they're secondary to all primary services in the band, including public safety and land mobile. So, anything that comes on the air, they have to protect.

MR. BUCHANAN: Hi, Dave Buchanan, San Bernadino County in Southern California. Bob got to part of my

question, which was basically where you were at with the cable end of things, cause that -- but, I still have a question. Will the converters, when they come out and they put DTV on cable, count as part of the penetration for moving things off and is that included in that 2006 date? Or, does it have to be actual TV sets themselves?

MR. FRANCA: Well, we have the 2006 date, then Congress basically kind of put this other 85 percent penetration requirement, but I think it clearly would include the cable boxes. If you can get the signal, the way the language reads, it says that if the signal is available to the public and through cable, that's traditionally done through a set-top box, so that clearly would count.

MR. BUCHANAN: Yes, I think -- the reason I ask, I think you're aware, in Southern California, just 63, 64, 68, 69 between analog and digital assignments, are all, affect us, and we essentially -- unless we can do something and you alluded to it with Bob's question, that we don't have to protect all of the six megs on some of this, as far as the adjacent channel?

MR. FRANCA: Well, I think you have to protect all of the six megs, but that doesn't preclude the use of some adjacent channel. I think if you -- you know, there's engineering techniques that as you get away from the band edge, you know, the way the channels are grouped, with good

engineering practices, I can envision ways to make some of that spectrum, adjacent channel spectrum available.

MR. BUCHANAN: Okay, I don't know if that would help, but it's certainly an opportunity. Last question, is there any plans to mandate a date that all TV sets manufactured have to be capable of the digital TV reception, and if so, why not?

(Laughter.)

MR. FRANCA: We haven't done that yet, and we -- I think what we said in the item is that we thought that there were enough market forces to kind of make this happen.

MR. POWELL: John Powell, again. Just a comment. One of the holes that's punched in this allocation in Northern California is by a station that sits on the top of Mt. Diablo. Mt. Diablo is a little knoll that happens to see more of the earth's surface than any mountain in the world except Mt. Kilimanjaro. And the owner of that station told the person that owns the land that his only reason for being there is that it guarantees that he has access to cable throughout a wide service area.

To me, that's kind of, you know, that must carry issues, something that we all ought to be looking at, and how we might be able to resolve that at some point. Because if you look at the San Francisco area now, the cable access from all of the stations, because TCI is the cable provider

for the entire metropolitan area, they get all their feeds over fiber direct from the networks and the stations, and they take nothing off the area anymore. It's an issue that, if we could resolve that, might free up a whole lot of this spectrum.

MS. WALLMAN: Anything further? Well, thank you very much, Bruce. I think, you know, sort of what you hear from this group is there any possible way that the transition can be accelerated, because every little bit counts? I think the message you've delivered is, in places where the conflict persists, it's likely to persist until at least 2006 and that there is an element by which the Commission's actions are bounded by a Congress determination that a certain penetration level of digital capability be achieved.

But I think you hear the sense of this group here that even small actions that the FCC might consider taking to reinforce the market incentives that the broadcasters have to move out would be most welcome.

MR. FRANCA: Okay. We'll take that back. Having worked on something for ten years, I certainly have every desire to see this transition go very, very quickly, and I think one of the nice things is that we have 75 stations on the air. The systems, everything is sort of working pretty well and the reception, you know, has been better than

expected for most of what we've seen. So, we're excited that that will occur.

The other thing that will happen and, I think, will help, is that getting commercial operators and doing an auction on the rest of the spectrum, I think, will also put pressure on trying to clear this spectrum as quickly as possible. So I think that's going to be a positive for the public safety community, also.

MS. WALLMAN: Thank you very much.

MR. FRANCA: Thank you.

MS. WALLMAN: We're very glad to have you here today.

(Applause.)

MS. WALLMAN: Okay. I have a couple of announcements to share with you. First, I wanted to introduce an alternate for one of the Steering Committee members. He is an alternate for Mayor Harmon, who was not able to attend today. During one of the breaks, Lt. Thomas Percich introduced himself to me. He's with the St. Louis Police Department and he's here standing in for Mayor Harmon, who couldn't be with us. Thank you, Lieutenant.

Second, we have had made available to us copies of the subcommittee meeting minutes and we're going to try to get those copied during the course of the afternoon and make them available for you if you want to take them with you in

hard copy. And we'll post them and so forth, so that people can, if you'd rather not carry the paper back, you can get them by that alternative means. But we'll try to have paper copies for people to take with them this afternoon.

And finally, I wanted to share with you a message from the Y2K program here at the FCC. We're advised that on July 15, the Department of Justice is going to be organizing a two-hour broadcast on the subject of Y2K and first responders. And I have here sort of the invitation letter, but we've been contacted by the folks in the FCC who are going to coordinate with DOJ and one question that's been put to the FCC folks is, are there chiefs of police, fire chiefs, fire commissioner, from outside the Washington area who might be interested in participating in this program? It would involve a rehearsal on the 14th and then the broadcast on the 15th. So if there are people that this group, I thought it would be apt to ask this group, if there are people that you think would be good participants in this regard, please let Michael know, so that we can pass that on to the Y2K folks here at the Commission.

MR. WILHELM: In making your decision, you might consider the fact that all expenses incurred by the participants will be paid by the FBI.

MS. WALLMAN: Again, we're a little bit ahead of schedule, so we'll try to move things around a little bit so

we can keep making progress. What I think if Steve Proctor -- where is Steve sitting? Would you be willing to do your presentation before we break for lunch? Would that be -- so then we could take a break for lunch. I think Steve's got about 20 minutes worth of presentation to give to us, then we could take the lunch break on schedule at one. And Michael, you might see if Jane Schweiker can come at two instead of 2:30 and then we could tighten it up a little bit?

MR. PROCTOR: I just need technical assistance here.

MS. WALLMAN: And the able folks of the FCC will provide it.

(Pause.)

MR. PROCTOR: Hey, cool, technology at its best, operated by a technological idiot. I appreciate the opportunity. Kathy asked me to make a presentation on what we're doing in the State of Utah with respect to telecommunications and public safety. And after I left the APCO Board of Officers, I went back to a job that was totally different than when I left it to join the APCO Board of Officers. And then, last January, I decided to retire and jump into what I basically call a cauldron of effort towards developing a trunked radio system to serve agencies along what we call the Wasatch Front in Utah, and we'll talk

about that in a minute.

This has been an ongoing effort for a goodly number of years and it's finally coming to fruition and this is kind of a microcosm of what I believe most agencies' entities go through as they develop a process to put in a new radio system to serve specifically public safety needs. So what I'm going to talk about today is the Utah Communications Agency Network and we'll talk about the political, the technical, the financial and the regulatory issues of getting through the development of a complex system such as this.

To give you a little bit of a historical perspective, the first 800 MHz tests for the State of Utah started in a cooperative effort between Salt Lake County, the major population center of the state, and the State of Utah, back during APCO's Project 16. We were selected as one of the four cities to test 800 MHz and that process went very well and we were very pleased with some of the results.

In 1987, along with basically the rest of the country, we were involved in the NTSPC process and in 1991, our regional plan was approved by the FCC. And two years later, the Governor appointed a task force to study how we migrate from where we are in 150 and 450 and low band to where we need to go with new technology. And there was no assumption, by the way, made that we ought to just jump to

800 MHz. He wanted us to look at cellular and commercial and private services and all those opportunities we may have to use some privatized services, rather than to just build another radio system.

Between '93 and '97, what I call the political process took place, and the political process is a natural process of all the entities saying, who's doing what, who's going where, how are we going to do this? What if this happens? What if this doesn't happen? Well, I want to be in control of this? Well, I want to be in control of this. It's a process that takes time to go through, and if any of you from the state and local level are beginning this process, I guarantee you it will be a part of the effort that you need to take into consideration as you develop a new system.

Two years ago, in 1997, the issue was brought up before the state legislature and they passed a bill which established the Utah Communications Agency Network. This is a quasi-governmental entity, and the difference between it and a normal state entity is that it is governed by a board of directors made up of the users whom it serves. And those users are police chiefs, sheriffs, chiefs of operations, communications directors, 911 center directors, and they are the people that we respond to in providing the radio service. It's much like a consolidated dispatch effort,

where you have a board that allows you to work for them in managing their services.

Back to the task forces. As we went through the task force process, we had some findings that I don't think are strange to any of you. We found that our population was growing. We found that fire calls were increasing. We found that the population was migrating towards urban centers, leaving great portions of our state still very rural. We found that our crime rates were rising and we found out again that fire calls were increasing, because it's on the slide twice.

(Laughter.)

MR. PROCTOR: I don't have a very good editor, either. We found, if any of you have been in Salt Lake City over the last year, you'll know that our highways are being reengineered, and you cannot drive anywhere in Salt Lake without running into an orange cone. UDOT had a goodly number of services they wanted, and our requests for service are just jumping in all areas and all levels.

With respect to technology, we found that we had over 200 radio systems in little, rural Utah. We had four different bands that they were operating in, 450, 150, low band and high band and a few 800. Our technology was 25 years old. There were serious system reliability questions. The channel loading was great. There were no new channels.

We had signed interference issues and we didn't have the opportunity to use any trunking, shared resources, data or AVL in the existing system. We were then all facing the same problem you were facing with refarming the spectrum below 512 MHz, which was a great concern, and interoperability was also a great concern the task force addressed.

I'm hoping I'm on the same slide here. The recommendations of the task force were to immediately upgrade what we did, and they recommended that we utilize current technology in 800 MHz that was being developed. They suggested that we migrate the users to one common band, that we plan for the introduction of mobile data, that we investigate commercial services, those being CDPD, and some satellite data opportunities in the rural areas of the state, where there wasn't infrastructure built out.

They suggested that we formulate a cooperative approach, that we use a phased-in development and that we educate our users through the use of video presentations and we produced a video which starred our Governor and went around the state and made presentations to various entities. And I believe that has been made on a national level, also, and that worked very well in getting people involved from the grass roots level, in order to help develop this system. And then, finally, to develop a maintenance and training

plan for the use of the network.

The task force came up with some hard dollars, dollar estimates, and you can see the bottom line wasn't very pretty. And when you walk into the Governor's office and you say, good morning, Governor, I'm here to tell you you need $162 million to build a state-wide radio system, after he picks himself up off the floor and looks you in the eye and says, I've got social problems, I've got welfare issues, I've got highways to build, I've got schools to maintain, where do you think we're going to get this money? And he sends you back to the drawing board and says, find us a funding source, find us a cooperative approach, you end up going back to work, which is what happened in our case.

This give you a map of the eight-county area that we're looking at providing service in. This map indicates a number of different microwave systems that are already in place. Is the map in color? Pretty poor color. Most of the red-links that you see on there are new links that will be developed, and the other colors are links that are already in place that we will use, and we're using some from counties, other state links. We're even using some university microwave to help get our signals out into the rural areas to avoid the duplication of effort along this.

We have also performed a cooperative approach with Salt Lake County and we have Captain Nicholson from Salt

Lake County, who I'm glad to see involved in this process, who has developed a separate infrastructure, which we'll talk about in a few minutes. But we are cooperating together, working towards developing an interoperable systems and systems to serve this Wasatch Front area.

Then, another blessing came upon us. We received the opportunity to host the Olympic Games in 2002 and what this did is really quicken the pace. It really put the pressure on people to recognize, in order to provide for public safety and security for this big of an event, we are going to have to move rather quickly. And as I mentioned earlier, our focus then became these eight county areas that are a line of what we call the Wasatch Front. That's where about 90 percent of Utah's population is, that encapsulates all the venue events for the Olympic Games that we have coming.

UCAN, again, is a quasi-governmental entity. We have 15 members on our board. Ten of those are local government representatives by statute. So the local government representatives have adequate say on the management and maintenance of the system. Five of those members are appointed by the Governor as a direct political appointment. The membership changes in alternatives every two years. The members are revoted. We also have legislative input into our process.

During our development, we recognize that all users aren't going to migrate at the same time, that there will be a couple of different systems, that some users may not migrate at all. And as I mentioned earlier, Salt Lake County has built a system because their needs did not parallel with UCAN. They had a major jail facility coming on line, they had some issues of coverage and communications systems failure that caused them to strike out ahead of us. And Salt Lake County and Salt Lake City have partnered to develop a system of their own.

We currently have about 47 agencies that are working with us and have come on line, signed contracts for service, and are working towards the goal. Our stress has been interoperability, so that all these agencies can work together, and we have decided as a group to focus on the radio system first. CDPD has provided the data networking that we need for public safety and we do have a couple of stand alone data systems that agencies have installed. But we decided that the radio change was going to be so traumatic that we needed to focus on the radio change out first, and then deal with the data issues later.

We've completed a successful RFP process and procurement process and here's where we are today. The system is manufactured, has been tested at the vendor's site and is currently in Salt Lake City. Our site construction

for all those sites you saw located on the map is underway now. Our microwave passer being engineering -- and in the engineering process as we speak, and our financing was completed. And we could have a whole presentation on financing, such a large bond issue for this type of a system.

We initially looked at a vendor for financing and had pretty good assurance that that was going to take place, and as we got into the process, we found that the vendor makes great equipment, but they aren't great bankers. And we ended up financing through a local bank, and part of that process was to get all the service contracts in place for our agencies, in order to have collateral for the loan.

We ended up spending for the radio and microwave network, because we utilized existing sites and some microwave that was out there, about $17 million to develop this eight-county system, which, in the State of Utah, is one big chunk of money. I know in New York City, Harlan, that's not a lot of money, but in Utah, that is a big sell and it's a tough sell.

MS. WALLMAN: Would that be in comparison to the $165 top range number that you --

MR. PROCTOR: The $165 million was for a statewide system. This is for eight counties. Our initial eight-county estimate was around $37 million, so we feel we've

done okay through the procurement process, to get where we are today.

Again, our focus area was the eight counties and we have those 47 agencies working together and being a little redundant, Salt Lake City and Salt Lake County is operating on a different system, but it's of the same manufacture and it's in the same band. So for the first time, we have the same band that we will be operating in, and we feel that will go a long way towards our interoperability issues.

Our UCAN system has a digital backbone. It will be licensed in the NTSPC channels. Our education of the users is in process. We found out that one big concern we have in moving from where we are to where we're going is letting the users know how to operate the system, what the benefits are going to be. Developing a customer base, developing a training program. One of the problems we've seen in many instances is people will just put the radio in the hands of a user, untrained, and you have all kinds of chaotic problems to deal with.

Our system will be comprised of 95 percent in-building portable coverage with 43 sites, towers and facilities, and 11 major dispatch centers attached to it. We have about 9,000 units that are signed on to come up.

The process of getting through this reminds me of

a 60s song. I believe it was done by a group called The Hollies, about the road is long, with many a winding turn.

MS. WALLMAN: That can't be a 60s song, because I remember it's a 70s song.

(Laughter.)

MR. PROCTOR: 70s. I defer to the chairwoman. But as you start the process, you really don't know where you're going to end up, and there are many instances that you wonder whether this is ever going to go. I can remember many legislative subcommittee meetings, standing before them, trying to sell this product to them. There were a lot of blank faces out there. It's been a very difficult sell.

And when we look at the map, you can see the eight counties that this covers, basically border to border, and these eight counties are cooperating, and then overlaid on there are the number of sites that we have. Some of them are not to scale, but most of them are where the towers and facilities will be, and, to provide the radio coverage.

Our basic interoperability design, we haven't firmed this up, we still have a long way to go on this, is to have system-wide talk groups for the whole system, and then, at a regional level, basically a county level, to have region-wide talk groups to have the ability to console cross-patch and hardwire cross-patch between base stations for 150 and 450 interface. A good majority of our state off

the Wasatch Front still will operate in 150, and we have made a commitment to exchange ideas with our system and the county system, to insure that those who need interoperability can operate on either system.

We also plan to have ten mutual aid stand-alone repeaters located at sites other than the ones you saw listed, to insure that we have mutual aid capabilities and interoperability capabilities. And that ends the presentation, so I'd be happy to take any questions.

MR. WELLS: Carlton Wells with the State of Florida. Your last slide addressed the ten mutual aid channels, strategically distributed around that area. Does your mutual aid system provide the same coverage as the non-mutual aid system?

MR. PROCTOR: Hopefully, we're going to put them on strategically located mounds high enough so that they provide fairly well, or fairly good coverage, mobile to mobile. I mean, we recognize you're not going to get in-building coverage off the mutual aid. It's just matter of fact.

MR. WELLS: For the purpose of officer safety and public safety users, the concern that we voice all the time in Florida is that the users who were using the non-mutual aid system, when they have to go to mutual aid, if it's less coverage than their non-mutual aid, the integrity of that

mutual aid might be questioned by the users when they really need.

MR. PROCTOR: Appreciate the comment. That's very true. That's the same issue we're dealing with.

MS. WALLMAN: Yes?

MR. VAN STEIN: Larry Willard Van Stein. Good to see you, Steve. I've known Steve for quite some time.

MR. PROCTOR: Good to be here.

MR. VAN STEIN: He's someone I hold in high regard. My question is, you migrate to NTSPC channels, but I see you're going to keep all the 150 and 450. I thought there was a requirement to give back channels. And so you're going to give back part of the channels, all the channels, some of the channels? What's your position on that?

MR. PROCTOR: Because UCAN is an independent agency and the agencies that will be migrating over are a county, a city, a local unit of government, we're going to encourage them to get back the channels once they migrate over. Obviously, for the next couple of years, you're going to see some duplicative efforts.

There's a lot of talk in the area about keeping the 150 system up to help through the Olympic process and then, by then, we should have everybody migrated over and they can get off those channels and on to 800.

MR. VAN STEIN: So, your cross-patching is kind of a transitional phase, then?

MR. PROCTOR: That's exactly right.

MR. VAN STEIN: Thanks.

MR. PROCTOR: Thanks. John?

MR. POWELL: John Powell. Steve, because it's a question that my subcommittee is going to be addressing, have you planned in your system -- well, first of all, it sounds like this is an interconnection of regional systems or county systems, or do you have like a stand alone or subsystems that are then interconnected into a larger system? And if so, did you plan within the trunking facilities to have a bunch of interoperability trunk groups that would operate in a trunk mode?

MR. PROCTOR: The system is one system. It's four simulcast regions located in four counties, with IR sites supplying coverage to the rural counties. And the system is tied by one controller.

And the Salt Lake County system and I don't mean to put words in Scott's mouth, and he's welcome to come up and tell you about his system, also, but they have a separate controller. Interoperability between the two systems will be through unit IDs and through the mutual aid channels and from the fact that we're co-located on many sites.

We plan on tying at some of our mutual aid locations 150, 450 transmitters to 800, cross-banding them, so the unit's coming from outside the state onto the Wasatch Front and can communicate with those who they need to.

MR. POWELL: Let me restate my question a little bit. Have you provided within your talk restructure, interoperability talk groups so that people that are working within your regional system can intercommunicate, if all the participants are on the UCAN system?

MR. PROCTOR: That's where we're headed with the region-wide talk group, the system-wide talk group and then the local unit of government talk group. We're in the process of designing that right now, yes. Sorry I misunderstood.

MS. WALLMAN: Thank you very much, Steve.

MR. PROCTOR: Thank you.

(Applause.)

MS. WALLMAN: Okay, I'd like to come back just for a moment before we break for lunch to the issue of this November meeting. I have a feeling that this may have been asked and answered, but I think we use sometimes the Steering Committee schedules as a proxy for conflicts that the wider group may have.

But could people look at their calendars just to develop some options and then I'll talk with Jane and John

during the break to see if we can nail down availability. November 5 is a Friday, which would make the fourth subcommittee day. Anybody have an indication of a conflict on those two days?

(Pause.)

MS. WALLMAN: The whole week? Okay, so that could dovetail with meeting in San Francisco on the 4th and 5th?

(Pause.)

MS. WALLMAN: So, that cuts against, because they may not want to spend two more days out of the office --

AUDIENCE PARTICIPANT: That's the only problem. It's not a conflict directly.

MS. WALLMAN: Right, okay. Yes?

(Pause.)

MS. WALLMAN: Well, understood. How about the 12th, just as an option? That would put -- the 11th, is that -- yes, that's right, so that won't work. That's how we get to the 19th, right. I think we're essentially reconstructing the process that got us to the 19th.

I'm sorry? I'm sorry, I misunderstood. Friday the 5th is a possibility, then, except for its abutment to the IACP Conference. Okay, and the closeness to the September meeting.

So, December 2 would present overlap with the Users' Conference, right, Rick? December 2, it would

overlap -- and where is that meeting? Yes, okay. So now we're into the 9th and 10th of December. John?

AUDIENCE PARTICIPANT: I was just, I guess I talked to Jane earlier about somebody early on mentioned, well, let's do the November meeting in New York City. You would have to look at the calendars and the availability, but that might be a possibility with the West Coast in January, the people on the East Coast might prefer to come out to the West Coast in January.

MS. WALLMAN: Okay, I wanted to just develop some options so that we know what they are.

AUDIENCE PARTICIPANT: Actually, let me look at the availability, because we had blocked out the 19th of November.

MS. WALLMAN: Yes, that's my thought, that I could get some dates and then we could confer at lunch. You might have a chance to call back to San Francisco. Was there another --

(Pause.)

MS. WALLMAN: Bob?

AUDIENCE PARTICIPANT: If you look at the New York City option, you might want to (inaudible).

MS. WALLMAN: Yes, I think we would have to have a sponsor for that meeting, whether it's a municipality or some consortium of others who would be willing to sponsor

that.

Okay, so it looks as though the 18th and 19th in New York may be an option. Failing that, it looks as though the next best option is the 4th and 5th in San Francisco, of November.

AUDIENCE PARTICIPANT: Is that open?

MS. WALLMAN: Well, we will have to check with Jane and see whether that works, and my thought was we'd narrow the options through this discussion and then give Jane a chance to check and maybe we can get a call in to Ted Dempsey over the lunch hour.

(Pause.)

MS. WALLMAN: Okay. Yes?

AUDIENCE PARTICIPANT: Are we locked into a Thursday, Friday?

MS. WALLMAN: We don't have to be. The desires that I heard from a number of the state and local representatives was that that was preferable, because on travel, it can justify a Saturday night stay, which makes the ticket more affordable.

AUDIENCE PARTICIPANT: Well, then, Monday, Tuesday is the other way to do that.

MS. WALLMAN: So, that conceivably could make November 8th and 9th a possibility? We have one person saying no. Are there other conflicts on the 8th and 9th?

The 15th is not great for me, but I could come if that could be worked out. How about the 15th and 16th of November? Does that present conflicts?

(Pause.)

MS. WALLMAN: Is that a conflict that, is it a conference that would likely present a conflict for a lot of people? Okay. Of December?

(Pause.)

MS. WALLMAN: When you say project team -- okay. Okay. All right, do you have those dates? All right, well, why don't we confer, John Powell and Jane, if you're available just for a minute, we can talk and we'll put out some calls. If we could meet back here at 2:00 p.m. and hopefully wrap up the meeting date issues. We're trying to move up the final presentation of the day so that we can turn over the rest of the day in a more compressed fashion to the subcommittees. But we'll know more about that when we see you back here at 2 p.m.. Okay. Thank you.

(Whereupon, at 12:55 p.m., the hearing was recessed, to reconvene at 2:05 p.m. this same day, Friday, June 18, 1999.)

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A F T E R N O O N S E S S I O N

2:05 p.m.

MS. WALLMAN: Okay, a couple of announcements to start off with. We have the subcommittee meeting minutes. They've been copied and they're available. Where are they located?

MR. WILHELM: On the table outside.

MS. WALLMAN: On the sign-in table, and we also have several copies of Bruce Franca's presentation in hard copy, if people would like to pick up a copy. There aren't quite enough to go around, but a few to start and we'll make some more copies.

On the scheduling issue, here's where we are after several discussions during lunch and Jane's good efforts to call back and check on availability. We're basically back to the idea of meeting on the 18th and the 19th, but trying to do it in New York City, in order to accommodate members of the Radio Club of America, who have an obligation there in the evening. So there's what we have, a Plan A and a Plan B.

Plan A is to use the good offices of NYPD through Ted Dempsey, to try to get a meeting room and logistical support. Plan B is to ask our industry members of the Steering Committee if they will help us with the logistics, which would essentially involve reserving a room large

enough for a group about this size to meet for two consecutive days. So I may not need to call upon you to do that, but we're going to try to follow up with NYPD and see whether they can do it. But in the second instance, if you could consider your willingness to do that, we would appreciate that. The 18th and 19th -- 18th would be subcommittee day and 19th would be NCC.

The other very good suggestion that came up during the break was in the September meeting on the 23rd and 24th, we have the PSWN meeting that goes up until the middle of the day, so our normal schedule would constrain us to just half a day of subcommittee meetings, imposing upon people, perhaps, to work a little bit late. But one thought is that as the core work of the NCC becomes more about hearing and reacting to the work of the subcommittees, what we might do is steal some time in the morning on Friday and have the subcommittees meet not only Thursday afternoon but Friday morning, too, then use Friday afternoon for reports.

So I wanted to alert people to that, it might mean that we actually do use the whole afternoon. We may not be able to count on getting out early on that Friday, but I think it will be an efficient way of giving the subcommittees a good chunk of time to work in.

Okay, Michael, how long do we have this room today?

MR. WILHELM: Until five.

MS. WALLMAN: Okay, until five. So we have one more presentation to here today and I guess we were not able to move it up?

MR. WILHELM: She's here.

MS. WALLMAN: So, is Jane Schweiker here? We're a little bit ahead of schedule. We have a little bit of a gap here. Let me just see if there's any other -- well, that's the truth, we've got about a 15 minute gap until our next speaker arrives, so is there any other business that people would like to entertain in that window?

I vote, talk amongst yourselves for a few minutes there.

(Whereupon, a short recess was taken.)

MS. WALLMAN: All right, I'd like to introduce Jane Schweiker. Ms. Schweiker is the director of public policy and government relations for the American National Standards Institute. She is ANSI's primary representative to Congress, the Executive Branch and the states. Encouraging much greater reliance upon a voluntary consensus standards system has been the focus of much of her work over the past 15 years. Her background includes seven years in the Senate and a year in the White House, which if her experience was like mine, seemed much longer.

MS. SCHWEIKER: And it doesn't matter what party

it is.

MS. WALLMAN: Given the recent FCC decision stating that the NCC may either choose to become ANSI certified itself, or, alternatively, to rely on the good work of other ANSI accredited bodies, I asked Jane to give us an overview of the advantages of ANSI. Thank you very much for your time today, Jane. We look forward to your presentation.

MS. SCHWEIKER: Thank you, Kathy. Can you hear me all right? Am I wired up properly?

AUDIENCE PARTICIPANT: You're wired.

MS. SCHWEIKER: I'm wired. Good afternoon. I'm delighted to be here and what I would like to do is give you kind of an overview of what ANSI is, because most people don't know, including some ANSI members, who've signed up and said, now, what have I gotten myself into?

But in fact, there are a couple of things that we do that form the framework for our overall function, and I will go into that with you and then give you more detail than you want and, at the end, have some time for questions. But as we start this discussion, let me say, first of all, we have two primary functions. One is domestic and one is international. Domestically, we accredit standards developing organizations and that's your primary interest.

In the international area, we are the entryway for

U.S. participation in the International Standards Organization, International Electrotechnical Commission and other non-treaty standards organizations. If you'll keep that in mind, I'll go through some of my canned presentation on what is ANSI. Some of it will relate to you and some of it won't. Is this better?

Oh, scared me when you said camera. I though, oh, no. ANSI is the American National Standards Institute. Our headquarters currently is in New York. As of about a month from now, however, the president of ANSI will be based in Washington, in our office here, and so we will be adapting to that. Some of us are pleased about that, some are not as pleased. I'm pleased.

ANSI's mission statement is a convoluted statement, because when you deal with ANSI, there are no simple yes or no answers and nothing is easy. Our mission statement is that our mission is to enhance the global competitiveness of U.S. business and U.S. quality of life. And the quality of life obviously takes in health and safety concerns and non-business interests.

And we promote and facilitate voluntary consensus standards and conformity assessment systems and safeguard their integrity. It's a mouthful. I will do some explanation of that as we go on. From your point of view, what would be of interest is our processes for safeguarding

the integrity of standards development, to make sure that everybody who is materially affected has a chance to participate in the development of standards, essentially.

What is ANSI? We're a federation, we're an umbrella organization. We are -- I'll go into our membership composition in a moment, but we're an organization of organizations and government agencies. A lot of federal agencies are members of ANSI and I'll go into that in a bit. We're a process organization. We provide a mechanism for insuring the integrity of the process and make sure the procedures are followed.

We're also a staff. We have a staff of only about 100 people. Almost all of them are in New York. We have the government relations portion down here in Washington and we have the conformity assessment staff in Washington, also, and as I mentioned, we will soon have the president of ANSI in Washington. The new president should be designated on July 1, so some of us internally are waiting to see what happens with that.

ANSI's value is in three primary areas. As a policy forum, as an accrediter and as a source of information. Let me speak very briefly about our value as an information provider. We provide standardization information and education and a lot of it is becoming available on the web. We have a web site that you're

welcome to visit -- ANSI.org -- and we also have something, NSSN. The original meaning of that acronym was National Standards System Network. Essentially what it is is a database that contains information, bibliographical information standards worldwide. And so, it's possible, it's a subscription service. Those who need to know, is there a standard in this area, is there a standard in that area, is something under development somewhere, can go to NSSN and find out if there is, where it is and how to find it, and how to order it, if it's a document already in publication.

The Defense Department standards are now up there. So are ESTM things. You cannot go there and see the actual standards and print it out, because of copyright laws and so on, but it's a magnificent resource for those who need to know what's out there and how to get a hold of it.

I would like to talk for a moment about what the ANSI federation is, because it's really an unusual, it's an unusual animal. It's the good news and the bad news, because we're a combination of companies, trade associations, professional and technical societies, consumer organizations, labor interests. Everybody is under the tent -- good news and the bad news -- and you in the public sector already know how that works. But it means that we have an unusual ability to bring people to the table, and to

get, you know, competing interests at the table, away from the cameras, to sit here and try and hash out their differences and agree on whatever they can agree.

Usually, it's in a technical area, but obviously, some of the debates get into non-technical things. It just is in the nature of it. You can't make totally pure decisions without discussing the realities of life. And this ability to bring all these different interests to the table is ANSI's main asset. It's also what slows us down, but it's a wonderful, uniquely American kind of thing.

We have a little over 1,000 member companies. Many of them are multinational. They are from every industrial sector in the United States, so this is the only place where you will find people from the automotive industry talking to pipe manufacturers or plastics people or telecom people. So, again, the cross-pollination of ideas is great.

We have about 280 trade associations and professional societies represented within ANSI. And again, it's the entire spectrum of our industrial economy.

We're weakest in the area of consumer and labor. We're trying to get more involvement and we're seeking ways to do that, but the door is open and we welcome more participation by consumer groups and labor institutions. We have about 40 government agencies that are active within

ANSI, and when we say, you know, we want an equal partnership between private sector and public, we're very curious about it. Over a third of our board of directors is comprised of representatives of federal agencies. EPA, Defense Department, NIST, the National Institute of Standards and Technology, Consumer Product Safety Commission, Federal Aviation -- or, excuse me, NASA, and several other agencies, have representatives on the ANSI board of directors and they're active within all levels within ANSI.

And that input is extremely important and we value it, and fought hard to get it last year when that was being questioned.

This partnership approach between the private sector and public sector, in the area of standards and conformity assessment, conformity assessment is conformance to the standard. Can you actually, you know, meet a standard that's there, it's testing and certification and so on? This partnership approach has been very successful. It's gotten a lot of bipartisan support over the years, and in recent years, that's become even more important and there have been several pieces of legislation, where Congress has said to government agencies, you will work closely with the private sector. You will adopt and use voluntary standards whenever possible, when it meets your mission. And they've

also said, you will participate in the development of standards in the private sector.

I work with the agencies a lot as they come to terms with this policy. Many of them have been supportive of it for many, many years and been very actively doing that. In some, there has been resistance, more often because of lack of understanding of quite how to do it than from specific reasons to resist.

We have maintained, and Congress obviously has agreed, that you get better standards if everybody is at the table, the regulators and the manufacturers and those who actually use and implement the process.

Standards are called voluntary standards because it's a voluntary process to develop them. However, when an agency cites them in regulation, or Congress puts them in a law, then they're not voluntary. But as we develop them, they are voluntary. But the government does not have to spend all their time and have limited expertise focusing on them to do it all by themselves, if they do it through ANSI.

We work very, very closely with government agencies on matters affecting international trade and trade policy. ANSI, as I mentioned, is U.S. representative to non-treaty standards organizations around the world. USTR is one of the agencies that have a representative on the ANSI board of directors, so we work very closely with them

on trade policy things. This chart is just meant to show what ANSI -- ANSI works with these organizations, whereas USTR or other government agencies work these different areas, whether it's in Latin America or whatever. There very frequently are private sector organizations -- excuse me, stumbling on my words. Frequently, there are non-government organizations that are involved in things and their counterpart is the official, like World Trade Organization or APEC in the Pacific area, dealing with government-to-government trade matters. And we deal with the Pacific Area Standard Council.

This, again, is a graphic that basically shows how we relate to other organizations around the world, other standards organizations, and we're the focal point for transmissions between our private sector -- for example, the European Regional Standards Organization. This is significant to you if later you want your standards to be accepted internationally. It isn't a dead end. If they're part of the ANSI system, they can be taken forward into the international arena.

We accredit technical advisory groups to go to the international area. In the telecom area, we accredit those groups that go forward from, whether it's the Telecommunications Industry Association, IEEE or ATIS, the Association of Telecommunications Industry Solutions. Those

are the ones that are most active in the telecom area.

We also appoint technical advisors to the International Electrotechnical Commission, the IEC, which handles standards in that area, and we delegate the secretariats for committees that develop standards in their particular areas.

Through ANSI, the U.S. has a way to have effective parties able to participate in ISO and IEC things and it's a way to have the administrative work done. As you get into the standards area, one of the things you see is that there's a whole lot of administrative work and a whole lot of administrative support that's required, and this is something that ANSI does provide. And we basically insure the integrity of the process. We make sure that it is not being dominated by one or another organization.

Domestically and internationally, one of our values is this is a policy forum to have discussions of what should policies be, what should be going on in various areas. As I mentioned, with participation by government and all these different industrial sectors, we have a forum that doesn't exist elsewhere for discussion of many of the issues confronting us globally.

Of most interest to you is our value as a national accreditor. We accredit standards developers, we have programs to insure conformity to standards and again, ours

is the role of providing integrity.

When an organization is accredited by ANSI to develop standards, it means that they have met various criteria. The most important criteria are that they have procedures in place to provide for openness, due process and an appeals process, and it must be open and above board. The procedures must be open to all materially affected parties. You cannot exclude a particular group because you don't like the way they're doing it. There are a couple of hundred accredited standards developers and there are three different ways to be a developer of standards.

I brought a complete set of our procedures, which I can leave with you. It's also available on our web site. It's a lengthy, detail thing and I'm here to be the first to say, I am not the expert on ANSI procedures and for discussion of specific questions, we can make a list of the additional questions you have, we can provide follow-up information. We can arrange for somebody to be here to discuss those things or have a separate meeting to go over some of the procedural things. We'd be delighted to do that.

One of the values of being accredited by ANSI is that the ANSI designation and accreditation is valued in the marketplace. It also is valued by the Hill in terms of they know the value of ANSI accreditation, meaning it's open.

All stakeholders can be at the table.

SDOs, that's a phrase that we use in our community. It's Standards Developers. Those who develop standards benefit from ANSI because of our relevance to the global scene and global international -- the international standards area. Some are very involved in self-regulation. That's useful to those who are involved in self-regulation. It's a way of reducing costs and making sure that the development of the standard, the cost of that is spread out, and a lot of it is reducing redundancy. You don't want three organizations developing the same standard, and that does happen in some cases.

And basically, when the standard comes out, you want it accepted, and if everybody's been at the table and you've made your compromise in the committee system, what comes out is what you will see actually used in most cases. And again, we promote U.S. standards globally, and that means those standards that have come through the system, if you want your standard taken forward internationally, you can do it through ANSI.

ANSI's staff is in the role of facilitator. We do not get into the technical merits of standards and the technical content. That's up to you as the volunteers in the system. You do that in your own committees, and when it goes forward internationally, it is the ones who are

designated from the standards developer who take the issue forward and argue the technical merits in the international arena.

Government agencies generally claim that they benefit from using standards developed through the ANSI process by having lower costs, whether it's a procurement or regulatory use of the standard, but the private sector is used to working in this way and there's greater cooperation, that a lot of the adversarial feeling is missing when you get into the committee system.

That's not true absolutely every minute of every time, because obviously, everybody comes to the table with their own interests in mind and, you know, the greater the controversy, the longer the process, the greater the controversy and, you know, the more head butting. But at least it is a system where you do this without the cameras rolling and that makes for a lot more realistic discussion of what's at stake.

We also find that standards that are developed through the ANSI system are used in compliance with the World Trade Organization requirements, with openness and due process. We'd like to think that there's increased competitiveness and employment. I have not seen any statistics on employment and I would be loathe to make claims on that. However, in terms of legislative

conformance with all of the emphasis by Congress on the desirability of working closely with the private sector, obviously, you know, we're going to say that this will help with compliance with the government's, with Congressional mandates.

For further information on ANSI in general, here is the information on that, ANSI.org. For the great bibliography of documents that are out there, NSSN, it's this designation and I can make this available to you for distribution. And I would be glad to make myself available to act as intermediary between you and anyone else at ANSI for additional information.

I know there have been some questions about becoming accredited as a standards developer. What I would emphasize is that the time for accreditation depends upon how well documented, how well prepared you are in submitting an application for accreditation, how quick you are to respond to questions and answer them.

In our filing with the FCC last fall, we made the case that we feel very strongly that you may wish to take advantage of the fact that there are accredited standards developers in existence who could work with you to see that you get the standards that you want and you could by-pass the lengthy accreditation process if you took advantage of one of those who are out there.

I invited several, four of the main organizations to accompany me here today, if they wished to have someone here, so that they could have someone answer more detailed questions about how they operate and what they could do, not as a sales pitch but as a how it works kind of discussion. And we have one gentleman with us from the Telecommunications Industry Association and that's Ed Ornelis. Is that the correct pronunciation? Pardon me?

MR. ORNELIS: Ornelis.

MS. SCHWEIKER: Okay, I apologize for mispronouncing it. We met in the lobby a little before, but I'd be glad to talk with you and answer any questions you may have.

MS. WALLMAN: Thank you very much. I think that your contribution in the filing for reconsideration was a very valuable contribution and I sense among the committee members more interest in considering standards that are in the process of development than in becoming a separately accredited organization.

So I think your petition and the FCC's action on it to make sure that we have that option before us.

MS. SCHWEIKER: Thank you.

AUDIENCE PARTICIPANT: What is an ANSI NIST standard, as opposed to just an ANSI standard?

MS. SCHWEIKER: Okay, an ANSI NIST standard would

be a standard that was developed within NIST, that they have submitted to ANSI for approval as an American National Standard. We have two separate processes. One is for accrediting an organization. And then, secondly, we designate American National Standards, the documents.

The reason that this becomes important is that sometimes it is significant to be able to prove that a particular document has gotten a full consensus treatment. It's also important because organizations in some instances may develop documents that are not consensus documents. For example, they may have something -- and there was some history of that in this community, where an organization developed documents that was a guideline or something that was not a full consensus document.

So an organization that is accredited by ANSI can develop non-consensus documents, but if something is designated as an American National Standard assistance, subjected to a full consensus process.

MS. WALLMAN: Are there other questions for Ms. Schweiker?

MR. MAY: Hi, Paul May with Ericsson. I have a question. The licensing and IPR that is done for voluntary standards, does ANSI have the same policy or does the policy change when it becomes a federally mandated standard?

MS. SCHWEIKER: Our policy is our policy. It's

the ANSI IPR policy is the same as the ISO IPR policy. ISO, International Standards Organization. If it's going to have an ANSI designation, the intellectual property has to be available for licensing on a non-discriminatory basis, okay?

MS. WALLMAN: Other questions?

MS. SCHWEIKER: Incidentally, that's one thing that we're recommending be changed and be made mandatory internally, that the use of the ANSI IPR policy not be optional with documents, but that it be mandatory. I don't know whether that will be approved, but it's likely to be. There's such strong feeling that this is absolutely necessary.

MS. WALLMAN: Any others? Thank you very much for your contribution here and for proceeding, in general.

(Applause.)

MS. WALLMAN: Okay, well, we've rented the dance hall until five o'clock, so what we can do for the next two hours is turn this table over to the subcommittee leaders to make some more progress on the subcommittee work. Perhaps they'd want to take the whole two hours, perhaps they'd want to take some portion of the two hours. So can I ask the subcommittee leaders to caucus for a minute or two and advise us what they'd like to do?

(Pause.)

MS. WALLMAN: On the scheduling issue, by the way,

while the subcommittee leaders are caucusing about how they want to use this time, I think we can say with certainty that we'll be meeting in November on the 18th and 19th in New York City, but we'll have to post a list serve and post on the web site exactly what the times will be and where. We have a couple of the things in the works to try to nail down specific locations, which probably will not be able to report back to you on today.

(Pause.)

MS. WALLMAN: Do we have some sentiment from the subcommittee leaders about how they'd like to use this time?

MR. NASH: I'll be honest, I'm really not prepared to, other than just use it, you know, as a time for some local forum and maybe discussion among the working groups. I'm not specifically -- you know, have anything prepared for the subcommittee to sit down and talk about.

MS. WALLMAN: Right.

MR. NASH: And I know John Powell just left.

MS. WALLMAN: There's one vote, okay.

(Laughter.)

MR. NASH: I'll let Dick, you know, what he wants to do.

MS. WALLMAN: I don't want to force people to make up work to meet about, but, you know, since we only have a few opportunities to be together and we do have the space, I

want to make sure people know that they're welcome to use the space and the time.

Dick?

MR. DE MELLO: I'm preparing to leave in a few minutes for the airport myself, and I would really like to talk to Ted before we go, to march further in the thrusts that have been laid out here. And some of the chairs within the subcommittee have left already, so I think we've considered it cooked for this time.

MS. WALLMAN: Okay, all right, then, are there any further items before we adjourn? Yes?

MR. BUCHANAN: Yes, Dave Buchanan. Just for my working group and since everybody's here, I was just curious. I'm heading up the one that's looking into trunking for interoperability.

MS. WALLMAN: Yes.

MR. BUCHANAN: Trunking on the interoperability frequencies. Does anybody know of any agency that is currently, say, trunking the NTSPC five channels? I've never heard of any or any trunking in high band or anything like that on our UHF mutual aid channels.

Okay. I didn't think there would be, but I wanted to ask.

MS. WALLMAN: All right, then, we're adjourned. Thank you very much. Everyone who is traveling, have a safe

trip home and a good weekend. Thanks.

(Whereupon, at 2:50 p.m., the hearing was concluded.)

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